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PERSONAL.

Mr. Charles Baillairge, City Engineer of Quebec, Que., has resigned.

Mr. George Bowers has been appointed City Engineer of Lowell, Mass., and Mr. Cleveland H. Cheney, Superintendent of Streets.

Prof. R. L. Morris, of the Department of Civil Engineering of the University of West Virginia, Morgantown, W. Va., was married Dec. 21, to Miss Olive Hite.

Mr. Harry Lincoln Noyes, mechanical engineer, with the Union Carbide Co., Niagara Falls, N. Y., was married Dec. 28, to Miss Anna Hyatt Ransom, of Ulster, Pa.

Mr. Jas. D. Schuyler, M. Am. Soc. C. E., has not left Los Angeles, Cal., for Honolulu, as has been reported, but retains his office at 521 Stimson Bldg., in the former city.

Mr. W. H. Emerson has been appointed Water Commissioner of Brockton, Mass.; Mr. George A. Grant, Superintendent of Streets, and Mr. Arthur L. Beals, City Engineer.

Mr. George C. C. Plummer has been appointed Roadmaster of the Chattanooga Southern R. R., with headquarters at Chattanooga, Tenn., to succeed Mr. G. A. Odell, Roadmaster pro tem.

Mr. F. Wolcott Jackson, General Superintendent of the United Railroads of New Jersey Division of the Pennsylvania R. R., with headquarters in Jersey City, N. J., has been appointed Resident Manager of the same division.

Mr. W. B. Rider, civil engineer, formerly of South Norwalk, Conn., has been appointed Superintending Engineer of the Hemet Water Co., Hemet, Cal., which is remodeling and rebuilding about five miles of its flumes, tunnels, etc.

Mr. H. F. Kenney, General Superintendent of the Philadelphia, Wilmington & Baltimore R. R., with headquarters in Philadelphia, Pa., has resigned, and will, it is stated, be appointed to an executive position. He has been connected with this company since 1851.

Mr. Samuel H. Chittenden, M. Am. Soc. C. E., of East River, Conn., has been elected to the state senate from the sixth district of Connecticut. He is a graduate of the Sheffield Scientific School, of Yale University, New Haven, Conn.

Mr. F. O. Melcher, M. Am. Soc. C. E., late Chief Engineer of the Fitchburg R. R., has been appointed Acting General Superintendent of the same company, from Jan. 1, 1899, in place of Mr. C. L. Mayne, resigned. Mr. Melcher will have his headquarters in Boston.

Mr. Henry T. Gause has been elected President of the Harlan & Hollingsworth Co., Wilmington, Del., ship and car builders, to succeed his father, the late John Taylor Gause, whose death was noted in our issue of Dec. 8. Mr. Horace W. Gause has been elected Vice-President.

Mr. Edward Sutliff, mechanical engineer, has been appointed Resident Engineer for Japan and China of the American Trading Co., of New York city, and will sail Jan. 7, for those countries. The foreign offices of the company are at Yokohama, Nagasaki and Kobe, Japan, and Tien Isien and Shanghai, China.

Mr. Theodore W. Snow, has resigned his position as General Agent of the United States Wind Engine & Pump Co., Batavia, Ill., and has accepted the position of Manager of the Western branch of the Otto Gas Engine Co., with offices at 360 Dearborn St., Chicago. He will continue to conduct his business of contracting for railway water supply stations.

Prof. G. Yamakawa, Professor of Electrical Engineering in the University of Tokio, Japan, and Mr. T. Nishikawa, of Osaka, Japan, who was formerly Professor of Chemistry in the same institution, are visiting this country on their way home to Japan, from Europe, where they have been pursuing special studies for three years. They were at the Grand Pacific Hotel, Chicago, last week.

Mr. Eduardo J. Chibas, Assoc. M. Am. Soc. C. E., late Assistant Engineer to the Chief Engineer of the Fifth Army Corps in the attack on Santiago de Cuba, has been appointed Manager and Chief Engineer of the Guantanamo R. R., which proposes to construct several extensions, with headquarters at Guantanamo, Cuba. Mr. Chibas, who assumed his new duties on Jan. 1, 1899, will be remembered by many of our readers as the author of the interesting description of the work of the engineers in the Santiago campaign, contributed to Engineering News of Oct. 13, 1898.

Mr. Edward M. Boggs, civil engineer, has opened offices at 535 Stimson block, Los Angeles, Cal., for the practice of civil and hydraulic engineering. Mr. Boggs was Professor of Civil and Hydraulic Engineering in the University of Arizona from 1892 to 1897, and in the latter year became Chief Engineer of the Southern California Power Co., holding this position until the completion of the Santa Ana canal, Dec. 1, 1898. In our issue of the latter date we noticed his election to the Chamber of Commerce of Los Angeles.

Lieut. Walter M. McFarland, Passed Assistant Engineer, U. S. N., has tendered his resignation from the Navy to accept the position of Assistant General Manager of the Westinghouse Electric & Machine Co., of Pittsburg, Pa. His resignation adds another name to the list of engineers who have made our navy what it is, but eventually resigned because the serivce does not offer sufficient inducement to men of ability in scientific work. Mr. McFarland was appointed to the U. S. Naval Academy in 1875 from the District of Columbia, and was graduated in 1879 as honor man and appointed to the Engineer Corps, in which department he served for several years at sea. From 1883 to '85 he was Assistant Professor of Mechanical Engineering at Cornell University. During the World's Fair at Chicago in 1893 he was Secretary of the Division of Marine Engineering and the Congress held there. Since then he has been Assistant to the Chief of the Bureau of Steam Engineering, Commodore Geo. W. Melville. At the time of the International Congress of Naval Architects and Marine Engineers, held in London, England, during the Queen's Jubilee, Lieut. McFarland represented the U. S. Navy Department.

OBITUARY.

Mr. Samuel S. Bent, iron manufacturer, of New York city, died at his home in Rye, N. Y., Dec. 31, aged 70. He was the founder of the Globe Iron Foundry, in New York.

Mr. Francis J. Rodgers, civil engineer, with the Mississippi River Commission, died at the Hotel Garrettson, Sioux City, Ia., Dec. 23. He was a resident of Albany, N. Y.

Mr. John K. Rychlicki, civil engineer, of St. Louis, Mo., died Dec. 22, aged 90. He was a native of Poland and a graduate of Warsaw University. He retired from business about 20 years ago.

Mr. Calvin W. Parsons, mechanical engineer, of Scranton, Pa., died Dec. 27, aged 46. He was at various times connected with the Vulcan Iron Works, Wilkes-Barre, Pa., the Dickson Mfg. Co., Scranton, and the Lackawanna Iron & Steel Co., Scranton. In 1894 he resigned the last position, which he had held for 11 years, and had since devoted himself to private practice.

Capt. Charles P. Kahler, U. S. Volunteer Engineers, died in Baltimore, Md., Dec. 30, aged 57, of typhoid fever contracted on his way from Porto Rico. He was long engaged in the practice of civil engineering in Baltimore and for a time was one of the Assistant City Commissioners. The company of volunteer engineers organized by him in Baltimore was one of the first to report at Peekskill, the headquarters of the command.

Mr. Emmet Alva Little, City Engineer, of Menasha, Wis., died Dec. 27. He was born June 2, 1839, in Chautauqua county, New York, and graduated from St. Lawrence University in 1869. He followed law as a profession for a number of years, and in 1876 he became a member of the firm of Jas. Little & Sons, machinists, Menasha. He was offered the position of Professor of Mathematics in St. Lawrence University, but declined it. He was City Engineer of Neenah, Wis., for several years.

Capt. Frederick Henry Smith, M. Am. Soc. C. E., consulting engineer, of Baltimore, Md., died Dec. 24, aged 59 years, as was briefly noted last week. He began his professional career on the Louisville & Nashville R. R., and later entered the service of the Confederate States, having charge of the manufacture of munitions of war. He organized the manufacture of nitre for the ordnance department on a large scale, and also developed iron mines for the use of the government. In later years he was Consulting Engineer for extensive bridge works in South America, and was Consulting Engineer of the Seaboard Air Line system. He designed many important works in Baltimore, Md., among them the North Ave. bridge.

Mr. John W. Chalfant, senior member of the Spang-Chalfant Steel Co., Allegheny City, Pa., died Dec. 28. He was born near Turtle Creek, Pa., Dec. 13, 1827, and graduated from Jefferson College in 1850. He entered the employ of Zug & Lindsay, iron merchants, of Pittsburg, and in 1854 left them to take a position with Spang & Co., Sharpsburg, Pa., then operating iron works at Etna, Pa. In 1858 he became a member of the firm, and in 1871 assisted in forming the Isabella Furnace Co., of which he was president. He is said to have been the first manufacturer to utilize natural gas as fuel in making iron, having introduced that method in his puddling and heating furnaces in 1875. Mr. Chalfant was also interested in a number of other enterprises, among them the Pittsburg & Western Ry., the Pittsburg Locomotive Works, the Pioneer Gas Co., and the Pittsburg Junction Ry. He was President of the Alumni Association of Washington and Jefferson College.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

AMERICAN INSTITUTE, AND THE HENRY ELECTRICAL SOCIETY.
Jan. 6. "Polarized Light," Louis H. Laudy. Jan. 20. "Alternating Currents," Wm. H. Freedman. Secy., D. R. Lovejoy, 111 W. 38th St., New York city.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
Jan. 6. Secy., O. Von Geldern, 19 Market St., San Francisco, Cal.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES.
Jan. 6. "The Electro-Metallurgy of Copper," John B.F. Hereschoff. Secy., Henry I. Weed, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.

CHICAGO ELECTRICAL ASSOCIATION.
Jan. 6. "Telephone Engineering: Some Problems, Solved and Unsolved," S. G. McMeen. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

THE ENGINEERS' CLUB OF PHILADELPHIA.
Jan. 7. "The Reconstruction of the Reservoir of the York Pennsylvania Water Co.," and "Notes Upon a New Power Improvement on the Niagara River," John Birkinbine. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

ENGINEERS' CLUB OF COLUMBUS.
Jan. 7. Secy., H. M. Gates, 12½ North High St., Columbus, O.

THE LOUISIANA ENGINEERING SOCIETY.
Jan. 9. Secy., J. F. Coleman, 712 Union St., New Orleans, La.

ENGINEERS' CLUB OF KANSAS CITY.
Jan. 9. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

DENVER SOCIETY OF CIVIL ENGINEERS.
Jan. 10. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Col.

NORTHWEST RAILWAY CLUB.
Jan. 10. Secy., T. A. Foque, Soo Line, Minneapolis, Minn.

NEW ENGLAND RAILWAY CLUB.
Jan. 10. Secy., Edw. L. Janes, P. O. Box 1158, Boston, Mass.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Jan. 10. Secy., Wm. H. Searles, Case Library Bldg., Cleveland.

CONNECTICUT CIVIL ENGINEERS' AND SURVEYORS' ASSOCIATION.
Jan. 10. Annual Meeting, Hartford, Conn. Secy., Geo. K. Crandall, New London, Conn.

FRANKLIN INSTITUTE.
Jan. 11. "Segregation Tests on Steel Ingots," A. W. Allen. Jan. 17. "The Clarification and Purification of Municipal Water Supplies," Mr. Allen Hazen. Jan. 20. "This Country of Ours," John Birkinbine. Secy., Wm. H. Wahl, 15 South 7th St., Philadelphia, Pa.

NEW ENGLAND WATER-WORKS ASSOCIATION.
Jan. 11. Boston, Mass. "Street and Force Mains." Secy., J. C. Whitney, Newton, Mass.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
Jan. 12. Annual meeting. Secy., C. A. McNab, 112 Mansfield St., Montreal, Can.

ENGINEERING ASSOCIATION OF THE SOUTH.
Jan. 12. Secy., C. B. Wilson, 1000 Broad St., Nashville, Tenn.

CENTRAL RAILWAY CLUB.
Jan. 13. Secy., H. D. Vought, 114 Fifth Ave., New York city.

ST. LOUIS RAILWAY CLUB.
Jan. 13. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

SCRANTON ENGINEERS' CLUB.
Jan. 14. Annual meeting. Secy., F. E. Pratt, 730 Madison Ave., Scranton, Pa.

MONTANA SOCIETY OF ENGINEERS.
Jan. 14. Annual meeting, Helena, Mont. Secy., A. S. Hovey, National Bank Bldg., Helena, Mont.

AMERICAN INVENTORS' AND MANUFACTURERS' ASSOCIATION.
Jan. 15. Annual meeting, Washington, D. C. Secy., Arthur Steuart, Washington Loan and Trust Bldg., Washington, D. C.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.
Jan. 16. Secy., Marshall Morris, 16 Norton Bldg., Louisville, Ky.

TECHNICAL CLUB OF OMAHA.
Jan. 16. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' CLUB OF MINNEAPOLIS.
Jan. 16. Secy., H. E. Smith, 1620 S. E. 14th St., Minneapolis, Minn.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
Jan. 17. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

WESTERN RAILWAY CLUB.
Jan. 17. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

WESTERN SOCIETY OF ENGINEERS.
Jan. 18. "Establishment of Street Grades," Charles P. Chase. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

ENGINEERS' CLUB OF ST. LOUIS.
Jan. 18. Secy., Richard McCulloch, 2401 N. Spring Ave., St. Louis, Mo.

BOSTON SOCIETY OF CIVIL ENGINEERS.
Jan. 18. Annual meeting. Secy., S. E. Tinkham, City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION.
Jan. 18. Secy., B. M. Gardner, 1522 Monadnock Block, Chicago, Ill.

ENGINEERS' AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.
Jan. 18. Secy., Frank H. Olmsted, Byrne Bldg., Los Angeles, Cal.

THE IOWA ENGINEERING SOCIETY.
Jan. 18-19. Annual meeting, Iowa City, Iowa. Secy., E. P. Boynton, Cedar Rapids, Ia.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
Jan. 18-19. Annual Meeting, New York city. Secy., C. W. Hunt, 220 West 57th St., New York city.

NEW YORK RAILROAD CLUB.
Jan. 19. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.

ENGINEERS' CLUB OF CINCINNATI.
Jan. 19. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
Jan. 19. Secy., F. A. Charpiot, P. O. Box 13, Savannah, Ga.

THE WEST VIRGINIA SOCIETY OF CIVIL ENGINEERS AND ARCHITECTS.
Jan. 19-20. Annual meeting, Charleston, W. Va. Secy., W. Steenbergen, Point Pleasant, W. Va.

NORTHWESTERN ELECTRICAL ASSOCIATION.
Jan. 19-21. Semi-annual meeting, Milwaukee, Wis. Secy., Thos. R. Mercein, 511 Montgomery Bldg., Milwaukee, Wis.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
Jan. 20. Annual meeting. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

ROCHESTER ENGINEERING SOCIETY.
Jan. 20. Secy., John F. Skinner, Reynolds Library Bldg., Rochester, N. Y.

THE DETROIT ENGINEERING SOCIETY.
Jan. 20. Secy, Henry Goldmark, Wayne Co., Sav. Bank Building, Detroit, Mich.

NATIONAL ASSOCIATION OF MANUFACTURERS.
Jan. 24-26. Annual convention, Cincinnati, O. Secy., E. P. Wilson, Room A, Chamber of Commerce, Cincinnati, O.

INDIANA ENGINEERING SOCIETY.
Jan. 24-26. Annual meeting, Indianapolis, Ind. Secy., J. B. Nelson, 61 Baldwin Block, Indianapolis, Ind.

MICHIGAN ENGINEERING SOCIETY.
Jan. 24-26. Annual meeting, Lansing, Mich. Secy., F. Hodgman, Climax, Mich.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
Jan. 25. Secy., Ralph W. Pope, 26 Cortlandt St., New York city.

ILLINOIS SOCIETY OF ENGINEERS AND SURVEYORS.
Jan. 25-27. Annual meeting, Champaign, Ill. Secy., Jacob A. Harman, Peoria, Ill.

FOUNDRYMEN'S ASSOCIATION, PHILADELPHIA
Feb. 1. Secy., Howard Evans, Pier 45, Delaware Ave., Philadelphia, Pa.

ENGINEERING SOCIETY OF WESTERN NEW YORK.
Feb. 6. Secy., H. J. March, Library Bldg., Buffalo, N. Y.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
Feb. 6. Secy., C. L. Annan, City Engineer's Office, St. Paul, Minn.

NATIONAL SANITARY ASSOCIATION.
Feb. 15. Annual Meeting, New York city. Secy., Thos. E. Veal, Atlanta, Ga.

THE WESTERN FOUNDRYMEN'S ASSOCIATION.—At the last meeting of this association, held in Chicago, Dec. 21, Mr. Max H. Wickhorst, Engineer of Tests, C., B. & Q. R. R., read a paper on "Porous Castings and Occluded Gases."

ASSOCIATION OF ENGINEERS OF VIRGINIA.—A circular letter has been issued by Mr. Jno. A. Pilcher, Secretary of this association, stating that on Dec. 31, 1898, the Association of Engineers of Virginia was formally abandoned. The library of the association will be turned over to the Library of the Washington and Lee University at Lexington, Va.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—At the 129th meeting of the institute, on Dec. 28, Mr. Arthur A. Hamerschlag delivered a lecture on "Education of Electrical Apprentices and Journeymen," in which he advocated trade schools and the education of young men to be good journeymen rather than poor electrical engineers, such as many of the so-called technical colleges are turning out.

THE GEOLOGICAL SOCIETY OF AMERICA.—The annual meeting of this society was held at Columbia University, New York city, on Dec. 27. The election of officers for the ensuing year resulted as follows:

Pres., Benjamin K. Emerson, Amherst, Mass.; Vice-Presidents, Geo. M. Dawson, Ottawa, Ont., and Chas. D. Walcott, Washington, D. C.; Secy., H. L. Fairchild, Rochester, N. Y; Treas., I. C. White, Morgantown, W. Va.

AMERICAN MATHEMATICAL SOCIETY.—The 5th annual meeting of this society was held at Columbia University, New York city, on Dec. 27. The following officers were elected for 1899:

Pres., R. S. Woodward, New York city; Vice-Presidents, Prof. E. H. Moore, Chicago, and Prof. T. S. Fiske, New York city; Secy., F. N. Cole, Columbia University, New York city; Treas., Prof. Harold Jacoby, Ithaca, N. Y.

VIRGINIA STREET RAILWAY ASSOCIATION.—This is the name of a new street railway association organized at Richmond, Va., in December. The charter members are: Richmond Traction Co., Staunton Street Car Ry. Co., Roanoke Street Ry. Co., Roanoke Light & Power Co., Lynchburg & Rivermont Ry. Co., Norfolk Street Ry., Norfolk & Ocean View Ry. Co.

The officers for the ensuing year are: Pres., R. D. Apperson, Staunton; Vice-Pres., E. R. Williams, Richmond; Secy. and Treas., E. P. Woodson, Lynchburg.

PITTSBURG FOUNDRYMEN'S ASSOCIATION.—The last meeting of this association was held on Dec. 27. Dr. Wm. B. Phillips read a paper on "Yard Grading of Pig Iron," in which the present method of grading pig iron, including 13 grades, was outlined, and a new method, including only 6 grades, was described. The general opinion as developed by the discussion was in favor of a greater uniformity of methods and standards of grading pig iron, and a resolution was adopted recommending that the American Foundrymen's Association adopt standard methods for foundry purposes.

CHICAGO ELECTRICAL ASSOCIATION.—A meeting of this association was held on Dec. 16. Mr. Arthur V. Abbott, Chief Engineer of the Chicago Telephone Co., presented a paper on "Wireless Telegraphy," and illustrated his remarks by showing his experimental apparatus in operation.

The election of officers for the ensuing year resulted as follows:

Pres., Thos. G. Grier; Vice-Pres., J. M. Hollister; Secy., Cloyd Marshall; Treas., Harold Almert; Directors, F. S. Hickok, E. W. Jewell, Hayward Cochrane.

NEW ENGLAND WATER-WORKS ASSOCIATION.—The monthly meeting of this association will be held at Tremont Temple, Boston, Mass., on Jan. 11. The following papers will be presented:

"Cast Iron Pipes Used in the Metropolitan Water-Works," Dexter Brackett; "Description of the New Steel Force Main of the New Bedford Water-Works," Geo. S. Rice; "Steel Pipes," L. M. Hastings; "Description of the New Salt Water Fire System of Boston, Mass.," Frank A. McInnes; "Wooden Stave-Pipe," Arthur L. Adams; "Short Description of the Wooden Stave-Pipe at Manchester, N. H., Chas. K. Walker; "Improved Wyckoff Water Pipes," Geo. L. Wells; "A Compilation of Recent Data Relating to the Flow of Water in Pipes of Wooden Stave, Steel Riveted and Cast Iron," F. F. Forbes.

J. C. Whitney, Secy.

CONNECTICUT CIVIL ENGINEERS AND SURVEYORS' ASSOCIATION.—The 15th annual meeting of this association will be held on Jan. 10, at Hartford, Conn. Headquarters will be the City Hall Bldg. The following papers will be presented:

"A Study of the Construction of the Park Street Bridge, Hartford, Conn.," Edwin D. Graves; "The Surveyor's Interest in the Land Record Office," Arthur J. Patton; "Sewage Purification at Norfolk, Conn.," T. H. McKenzie; "Noteworthy Experience in the Construction of the Main Outlet Sewer at New Haven, Conn.," L. W. Burt.

Geo. K. Crandall, Secy.

AMERICAN SOCIETY OF CIVIL ENGINEERS.—A regular meeting of this society was held at the Society House, New York city, Dec. 21, which was devoted to a discussion of the subject of "Building Laws."

Prof. W. H. Burr, in discussing the laws of New York city, considered them fully as bad, if not worse, than those of other large cities, and called attention to the absence of any requirements for the quality of cement, and the use of cast iron column formulas which permitted a factor of safety of about half what actual tests had shown to be necessary. The use of cast iron columns at all was severely criticised. The lack of windbracing requirements for tall buildings was also pointed out.

Mr. Geo. B. Post reviewed the New York city building laws, and pointed out the fact that they were framed at a time when five or six stories was the limit in height, and were not suitable for the high buildings now being erected. The inadequate methods of fire protection was mentioned as an instance of this.

Mr. J. F. O'Rourke regarded the tall buildings as well designed and built, fully as much so as if the building law, were perfect. Some modification of foundation specifications should be made taking into consideration the loading of the particular kinds of soil encountered. When foundations were carried to solid rock the amount of unit strain allowed upon the caissons should be specified.

Mr. George Hill advocated a revision of the building laws and a change of the Building Department, so that it should be composed of five members of the American Society of Civil Engineers, several of whom should also be members of the Institute of Architects and that this body should approve of the regulations framed by the heads of the departments of fireproof construction, plumbing, lighting and ventilation.

Mr. W. H. Breithaupt read some sections of the existing law to show how confused some of the requirements were.

Mr. G. A. Just stated as has opinion that the fault was not so much with the existing law as with the way it was interpreted.

THE ARCHITECTURAL LEAGUE of New York held its monthly meeting and dinner at the League's House on Jan. 3. The topic of the evening was the "Plan of the City of New York," especially with reference to its reconstruction for the better handling of its commerce and giving better access to its new bridges over the East and North Rivers. Mr. George B. Post opened the discussion by presenting a plan for providing approaches to the new East River bridge, in Manhattan. This approach would terminate in the heart of the most thickly populated or tenement house section of the city, with no existing street more than 50 ft. wide. The expected traffic over this bridge would have no sufficient outlet, and congestion would surely follow unless some radical changes were made. Mr. Post proposed the creation of a circular plaza at the west end of the bridge approach, and from this he would project two wide diagonal streets, one leading directly to Union Square and the other to Chatham Square. Mr. Post also submitted a plan for new city buildings on an area bounded by Reade and Worth Sts. and by Elm and the triangle made by the intersection of Baxter and Chatham Sts. The conformation of the ground was such that he would elevate the city buildings on a terrace and pass Centre St. underneath the buildings and the interior court by archways. The chief entrance to this terrace would be by an inclined way occupying the block between Duane and Pearl Sts. and opening on Broadway, with Elm St. passing beneath. He argued that this was the cheapest territory available in that section, and it adjoined, on Centre St., the sites of the new Hall of Records, the new prison and the Criminal Court buildings. Mr. E. P. North, Vice-President, Am. Soc. C. E., presented a plan of proposed diagonal streets, somewhat similar to that of Mr. Post, for the New York entrance of the new East River bridge; but he proposed rather to widening existing streets than to cut through blocks, for part of the way, and suggested the connection of the new and old East River bridges by an elevated railway, so that trains could run continuously over them in a great loop and thus add 30% to their carrying capacity as contrasted with the present method of shifting trains. Mr. North also proposed other wide diagonal streets; one passing from Union Square to the 23d St. ferry, on the North River, and another cutting across from this ferry to the neighborhood of the Grand Central Station. He also proposed a diagonal street from about 23d St., on the East River, directly into the heart of the dry goods section, and argued that if this street were made about 200 ft. wide and properly paved, it would save nearly one hour's time in passenger and freight traffic coming to this district from Long Island Sound. Messrs. Jules Harter, Milton See, A. H. Thorpe and Charles W. Stoughton, members of the League, also presented papers treating of the improvement of the water front of the city and its better street arrangement.

The evening's meeting was in charge of Mr. H. K. Bush-Browne, Chairman of the current work committee. Mr. Post, incidentally, soundly denounced the sky-scraping structures of New York city, and called them architectural enormities, impossible of proper treatment by any architect except as towers with all sides decorated—and this was a structural impossibility in this city. He detailed the efforts of the committee appointed last year to effect the passage of a law regulating the height of buildings; and this effort was so nearly successful that he was sure of success in the near future. Mr. Charles Stewart Smith promised the hearty co-operation of the Chamber of Commerce and the insurance companies, and said that the fact that insurance rates were being doubled on these buildings was having a powerful effect in checking the skyward tendencies of builders.

NEW PUBLICATIONS.

THE ROSE TECHNIC. December Number.—T. D. Witherspoon, Editor-in-chief. Published by the Rose Polytechnic Institute, Terre Haute, Ind. Paper; 10¾ × 8 ins.; pp. 61 to 90. 15 cts.

We depart from our usual course, in noting this periodical, simply because this Christmas number of the "Technic" is well worth noting. The leading article is the "History of the Stone Arch," written by Prof. Malverd A. Howe and illustrated by excellent photo-engravings of 34 of the most notable stone arches in the world, including both ancient and modern examples. The history of the arch covers a period extending from about 4000 B. C. to the present time. The other paper in this issue is "The Microstructure of Iron and Steel," by J. J. Kessler.

WATER-WORKS REPORTS.—The following annual water-works reports have been received, the names given being those of superintendents or engineers, unless otherwise stated:

Manchester, N. H., Chas. K. Walker. Boston, Mass., John R. Murphy, Commissioner. Fitchburg, Mass., Thos. C. Lovell. Lawrence, Mass., A. H. Salisbury. Lowell, Mass., R. J. Thomas. Woonsocket, R. I. Byron I. Cook. Rochester, N. Y., Emil Kuichling, Syracuse, N. Y., Wm. R. Hill. Newark, N. J., M. R. Sherrerd. Philadelphia, Pa., John C. Trautwine, Jr. Reading, Pa., Emil L. Neubling. Richmond, Va., C. E. Bolling. Memphis, Tenn., special report, by John Lundie, of Chicago, Ill. Dayton, O., Chas. E. Rowe, Secretary. Indianapolis, Ind., special report, by Mr. John W. Hill, Cincinnati, O. Grand Rapids, Mich., F. A. Twamley, Secretary, Chicago, Ill., L. E. McGann, Commissioner of Public Works, Milwaukee, Wis., Geo. H. Benzenberg, City Engineer. Duluth, Minn., Thos. F. McGilvray, City Engineer. Denver, Col., special report, J. B. Hunter, City Engineer. St. John, N. B., Wm. Murdoch. Halifax, N. S., F. W. W. Doane, City Engineer. Toronto, Ont., Edw. H. Keating.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3 1-2 x 6 ins.; 6 x 9 ins., and 9 x 12 ins.)

RIKER SYSTEM OF ELECTRIC VEHICLES.—Riker Electric Motor Co., Brooklyn, N. Y. Pamph.; 6 × 4 ins.

In this small booklet the several forms of electric vehicles, such as tricycles, victorias, phaetons, two and four-passenger traps and other types manufactured by this company are illustrated and very briefly described.

GAS AND GASOLINE ENGINES.—The New Era Iron Works Co. Dayton, O. Pamph.; 9 × 6 ins.; pp. 32.

The "New Era" gas engine is of the horizontal four-cycle type. The company makes a specialty of large sizes. Some engines of 125 HP. have been built, and are said to be the largest single cylinder four-cycle engines built in the United States.

FANS, DUST COLLECTORS, ETC.—The Allington & Curtis Mfg. Co., Saginaw, Mich. Paper; 6¾ × 8¾; pp. 53.

This firm makes a specialty of exhaust fans and piping for removing dust, shavings, chips, etc., from factory rooms, saw-mills, wood-working machines, shoe-making machines, etc., and delivering the refuse into bins or into boiler furnaces.

MACHINE TOOLS FOR WORKING PLATES, ETC.—Hilles & Jones Co., Wilmington, Del. Catalogue P. Pamph.; 12 × 9 ins.; pp. 32.

This is not a general catalogue, but a partial one, illustrating a few representative machines for punching, shearing, bending, cutting, planing, straightening and rolling heavy plates of other shapes in iron and steel, for boiler works, shipyards, etc.

ELECTRIC LOCOMOTIVES FOR MINES.—The Jeffrey Mfg. Co., Columbus, O. Paper; 9¼ × 6¼ ins.; pp. 32.

This pamphlet contains half-tone engravings and brief particulars of different forms of four-wheel and six-wheel electric locomotives, taking current from overhead wires. One of the specialties is a motor car for use at coke ovens, the car carrying coke and being fitted with a motor. Illustrations are given showing some of the engines in use at mines and smelters.

CENTRIFUGAL PUMPS.—The Baldwinsville Centrifugal Pump Works, Irwin Van Wie, Proprietor, Syracuse, N. Y. Pamph.; 9 × 6 ins.; pp. 48.

According to the preface to this pamphlet the Baldwinsville Centrifugal Pump Works outgrew 14 years ago the

"little hamlet which is known to the world chiefly because our pump advertises its name." The catalogue contains illustrations, descriptions and price lists of different styles of pump, driven by belt, engine, or electric motor.

PNEUMATIC TOOLS.—The Q. & C. Company, Chicago. Pamph.; 9 x 12 ins.; pp. 46.

The Q. & C. Company has purchased the entire business and good-will of the Ridgeley & Johnson Tool Co., Springfield, Ill., and has added the manufacture of pneumatic tools to its well-known business of making special machinery and railway appliances. The tools range from the lightest tools for chipping and calking to hammers powerful enough to drive 1¼-in. rivets, or do any work usually done with an 8 or 10 lb. sledge. The pamphlet contains many photographic views showing the kind of work done by pneumatic hammers and other tools.

HYDRAULIC TOOLS AND OTHER MACHINERY.—Illustrated Index. The Watson-Stillman Co., 210 E. 43d St., New York city. Catalogue No. 51. Pamph.; 6 x 9 ins.; pp. 50.

This pamphlet contains some hundreds of small cuts, three to nine on a page, illustrating the styles of hydraulic presses, jacks, accumulators, pipe fittings, gages, emery-wheel machinery, etc., manufactured by the Watson-Stillman Co. Each cut represents from one to 20 different sizes of tools, a full and complete description of which is kept in the form of loose sheets for distribution as required. This "illustrated index" is followed by an "index of illustrated sheets," which may be written for when descriptions of tools are desired.

PRESSURE BLOWERS, ROTARY PUMPS, etc.—Catalogue No. 3. The Connersville Blower Co., Connersville, Ind. Pamph.; 6 x 9 ins.; pp. 32.

This pamphlet describes and illustrates rotary blowers, pumps, gas exhausters and hydraulic motors. The relative merits of fans, rotary blowers and piston blowing engines are concisely stated as follows:

A fan is the cheapest in first cost, and if properly applied may be used economically for pressure up to 8 oz. unless a known and constant volume is required.

A rotary cycloidal blower costs more than a fan, but much less than a blowing engine; is more economical than either between from 8 oz. to 5 lbs. pressure, and can be arranged to give a constant pressure or a constant volume.

Piston machines cost much more than cycloidal blowers, are much more complicated and require more attention and repairs, but should be used for continuous duty for pressure above 5 lbs. and may be economical if they are properly constructed and not run at too high a piston speed.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work. Place.	See Eng. News.
Jan. 5.	Sewer, Scranton, Pa.	Dec. 29
Jan. 5.	Asphalt paving and sewers, Rochester, N.Y.	Dec. 29
Jan. 5.	Library building, Cincinnati, O.	Dec. 22
Jan. 5.	Pile trestles (3), Sacramento, Cal.	Dec. 22
Jan. 5.	Water-works, Darlington, Okla.	Dec. 15
Jan. 5.	Macadam roads (17½ miles), Decatur, Ind.	Dec. 1
Jan. 5.	Piling, etc. (200 lin.ft.), Ft. Hancock, N. J.	Jan. 5
Jan. 5.	Bridges (3), McMinnville, Ore.	Jan. 5
Jan. 6.	School building, Rochester, N. Y.	Jan. 5
Jan. 6.	Cleaning surface water inlets, Cleveland, O.	Jan. 5
Jan. 6.	Steel main, Pittsburg, Pa.	Jan. 5
Jan. 6.	Water-gas plant, Johannesburg, So. Africa.	Oct. 27
Jan. 6.	Extension electric plnt, Johannesburg, S.Af.	Oct. 27
Jan. 6.	Dredging, New York, N. Y.	Dec. 29
Jan. 7.	Gravel road, Valparaiso, Ind.	Dec. 8
Jan. 7.	Macadam road (10 miles), Cincinnati, O.	Dec. 22
Jan. 7.	Bridge abutments, Hoosick Falls, N. Y.	Jan. 5
Jan. 7.	Sinking a shaft, Wilkesbarre, Pa.	Jan. 5
Jan. 9.	Road work, Brighton, N. Y.	Jan. 5
Jan. 9.	School building, Wilmington, Del.	Dec. 8
Jan. 9.	Water supply, Bucharest, Roumania.	Dec. 15
Jan. 9.	Excavatiug, paving, etc., Houston, Tex.	Dec. 15
	Advertised, Eng. News, Dec. 15 to Jan. 5.	
Jan. 10.	Portland cemt (12,000 bbls.), Duluth, Minn.	Dec. 15
	Advertised, Eng. News, Dec. 15 to Jan. 12.	
Jan. 10.	Pumping engine for dredge, Charleston, S.C.	Dec. 15
	Advertised, Eng. News, Dec. 15 to Jan. 12.	
Jan. 10.	Capitol building, Phoenix, Ariz.	Dec. 1
Jan. 10.	Sewer bonds ($50,000), Grass Valley, Cal.	Dec. 1
Jan. 10.	Bridge work for 1899, Hasungs, Neb.	Dec. 22
Jan. 10.	Jail building plans, Boone, Ia.	Dec. 22
Jan. 10.	Telegraph poles, Alberni, B. C.	Dec. 29
Jan. 10.	Brick paving, etc., Oskaloosa, Ia.	Dec. 29
Jan. 10.	Road, Fortuna, Cal.	Jan. 5
Jan. 10.	Bridge work for 1899, Corydon, Ia.	Jan. 5
Jan. 10.	Excavating, etc., Pasadena, Cal.	Jan. 5
Jan. 11.	Boilers for water-works (2), So. Bend, Ind.	Jan. 5
Jan. 11.	Drains, Chicago, Ill.	Jan. 5
Jan. 11.	Sewers, Buffalo, N. Y.	Jan. 5
Jan. 11.	Water-works, Vailsburg, N. J.	Dec. 29
	Advertised, Engineering News, Dec. 29.	
Jan. 12.	Cement, St. Paul, Minn.	Dec. 15
	Advertised, Eng. News, Dec. 15 to Jan. 5.	
Jan. 12.	Power house, Annapolis, Md.	Dec. 22
Jan. 12.	Sea wall, Annapolis, Md.	Dec. 22
Jan. 12.	Sewerage connections, Cleveland, O.	Jan. 5
Jan. 12.	House connections, Cleveland, O.	Jan. 5
Jan. 13.	Pipe sewers, St. Louis, Mo.	Jan. 5
Jan. 13.	Water mains, Goshen, Ind.	Jan. 5
Jan. 13.	Electric lighting, etc., Minneapolis, Minn.	Jan. 5
Jan. 13.	Loading garbage scows, etc., New York.	Dec. 29
Jan. 14.	Park work and plans, Philadelphia, Pa.	Nov. 17
Jan. 14.	Steam tenders (3), St. Louis, Mo.	Dec. 22
Jan. 14.	Piles and stones, St. Louis, Mo.	Dec. 22
Jan. 15.	Sewers and drainage, Callao, Peru.	Dec. 1
Jan. 15.	Street cleaning, Indianapolis, Ind.	Dec. 15
Jan. 16.	Sale of telephone franchise, Duluth, Minn.	Dec. 8
	Advertised, Eng. News, Dec. 8 to Jan. 12.	
Jan. 16.	Pipe sewers, Elizabeth, N. J.	Dec. 22
Jan. 16.	Broken stone, etc., Tampa Bay, Fla.	Dec. 29
	Advertised, Eng. News, Dec. 29 and Jan. 5.	
Jan. 16.	Bridge abutments, Boston, Mass.	Jan. 5
Jan. 16.	Paving, curbing, etc., Atlantic City, N.J.	Jan. 5
	Advertised, Engineering News, Jan. 5.	
Jan. 16.	Water bonds, Whittier, Cal.	Jan. 5
Jan. 16.	Sewer, Denver, Colo.	Jan. 5
Jan. 17.	Receiving basins, Mount Vernon, N. Y.	Jan. 5
Jan. 17.	Street railway franchise, Pasadena, Cal.	Jan. 5
Jan. 17.	Street lighting, Mount Vernon, Ind.	Jan. 5
Jan. 17.	Boiler house, etc., Lexington, Ky.	Jan. 5
Jan. 17.	Water-works bonds, Bozeman, Mont.	Dec. 29
Jan. 17.	Macadamizing, Cincinnati, O.	Dec. 29
Jan. 17.	Bridge and plans, Binghamton, N. Y.	Dec. 22
	Advertised, Eng. News, Dec. 22 and 29.	
Jan. 18.	Court house plans, Mineola (L.I.), N. Y.	Dec. 22
Jan. 18.	Water-works, Winchester, Ind.	Dec. 22
Jan. 18.	Extending electric plant, Winchester, Ind.	Dec. 22
Jan. 18.	Sewers, Aiken, S. C.	Dec. 15
	Advertised, Eng. News, Dec. 15 and 22.	
Jan. 18.	Garbage crematory, San Francisco, Cal.	Jan. 5
Jan. 19.	Heating, etc., Pottsville, Pa.	Dec. 29
	Advertised, Eng. News, Dec. 29 and Jan. 5.	
Jan. 19.	Steam heating, etc., Akron, O.	Dec. 29
Jan. 19.	Docks, dredging, etc., Cleveland, O.	Dec. 29
Jan. 20.	Street lighting, Belding, Mich.	Dec. 29
Jan. 20.	Revetments, Houghton, Mich.	Dec. 29
Jan. 20.	Wharves and dredging, Honolulu, H. I.	Dec. 29
Jan. 20.	Boilers and machinery, St. Joseph, Mich.	Dec. 29
	Advertised, Eng. News, Dec. 29 and Jan. 5.	
Jan. 20.	Hotel building, Evansville, Ind.	Jan. 5
Jan. 20.	Steam fog signals, etc., Erie, Pa.	Jan. 5
Jan. 21.	Building, Washington, D. C.	Dec. 29
Jan. 21.	Artesian well, Cheboygan, Mich.	Jan. 5
Jan. 23.	Broken stone, etc., New London, Conn.	Dec. 29
	Advertised, Eng. News, Dec. 29 to Jan. 19.	
Jan. 23.	Bonds, Selkirk, Man.	Jan. 5
Jan. 23.	Water-works bonds, Canton, O.	Jan. 5
Jan. 24.	Water-works bonds, Wamego, Kan.	Dec. 29
Jan. 24.	Footway tunnel, London, England.	Nov. 10
Jan. 24.	Iron bridges (2), St. Thomas, Ont.	Dec. 22
	Advertised, Eng. News, Dec. 22 and 29.	
Jan. 24.	Storage batteries (4), Ft. Monroe, Va.	Jan. 5
	Advertised, Eng. News, Jan. 5 and 12.	
Jan. 24.	Water-works, Canby, Minn.	Jan. 5
Jan. 24.	Garbage collection, etc., Chicago, Ill.	Jan. 5
Jan. 25.	Dormitory building, etc., Phoenix, Ariz.	Dec. 29
Jan. 25.	Water-works bonds, McConnellsville, O.	Jan. 5
Jan. 25.	Water-works, etc., Orangeburg, S. C.	Jan. 5
	Advertised, Engineering News, Jan. 5.	
Jan. 26.	Brick, etc., Washington, D. C.	Dec. 29
	Advertised, Eng. News, Dec. 29 to Jan. 19.	
Jan. 27.	Water cylinders, Cleveland, O.	Jan. 5
Jan. 28.	Gas lamps (7,750), Cleveland, O.	Jan. 5
Jan. 30.	Day beacons (6), Florida Reefs, Fla.	Jan. 5
	Advertised, Eng. News, Jan. 5 to 26.	
Jan. 31.	Dry dock, Boston, Mass.	Dec. 29
Feb. 1.	Substructure of canal pier, Duluth, Minn.	Jan. 5
	Advertised, Eng. News, Jan. 5 to 26.	
Feb. 1.	Library building, Owatonna, Minn.	Jan. 5
Feb. 1.	Electric light plant, Richmond, Va.	Jan. 5
Feb. 1.	Electric light plant, Menahga, Minn.	Dec. 29
Feb. 1.	School building, Peoria, Ill.	Dec. 1
Feb. 2.	Electric lighting, New Orleans, La.	Nov. 3
Feb. 3.	Dredging (1,750,000 c.yds.), Houghton, Mich.	Dec 29
Feb. 3.	Dredging canals, Keweenaw Point, Mich.	Jan. 5
	Advertised, Eng. News, Jan. 5 to 26.	
Feb. 6.	Water-works bonds, Berea, O.	Jan. 5
Feb. 7.	Sale of canal, Annapolis, Md.	Dec. 1
Feb. 10.	Jail building, Keyser, W. Va.	Sept. 29
Feb. 13.	Water bonds, Reno, Nev.	Dec. 22
Feb. 20.	Lift bridge near Taylor St., Chicago, Ill.	Dec. 29
	Advertised, Engineering News, Dec. 29.	
Feb. 25.	Court house, Douglass, Ga.	Dec. 29
Feb. 28.	Dust-cart designs, London, England.	Jan. 5
Mar. 1.	Court house, Arkadelphia, Ark.	Jan. 5
Mar. 15.	Electric r'y (23 miles), Shanghai, China.	Nov. 24
	Advertised, Eng. News, Nov. 17 to Dec. 8.	
Mar. 15.	Purchase of water-works, Belem, Brazil.	Dec. 1
Mar. 31.	Telephone concessions, Shanghai, China.	Nov. 24
	Advertised, Eng. News, Nov. 17 to Dec. 8.	
Apr. 1.	Viaduct substructure, St. Joseph, Mo.	Jan. 5

RAILWAYS.

ALLEGHENY & WESTERN.—We have received the following additional information with regard to the 2,313-ft. tunnel on this line near Fordham, Pa.: The two headings were started on May 17, and met Oct. 11. The greatest amount of heading driven in one week of twelve shifts was 93.8 ft. in west heading and 91.0 ft. in east heading, making a total of 184.8 ft. for two headings in twelve 11-hour shifts. The headings averaged 11 ft. high by 17 ft. wide. The timbering was completed Nov. 9, and bench all taken out Nov. 21. The tunnel is 24.5 ft. between wallplates, with 16 ft. plumb posts, or, in other words, 16 ft. from bottom of wallplate to subgrade. A style "A" Barnhardt steam shovel was used to move muck after bench had been blasted. This is the first single-track tunnel in which a steam shovel has been used. The stone bench walls were commenced a short time ago, and arching with brick will begin in about one month. The tunnel, when completed, will have sandstone bench walls, 15 ft. high, built with batter of ½-in. in 1 ft., and a brick arch 16 ft. in diameter. Tue arch will be of stone for a distance of 30 ft. from each portal. R. L. McCulloh, Res. Engr., in charge of tunnel section.

BALTIMORE & OHIO.—In accordance with the plans formulated two years ago by the receivers to place this railway system in first-class condition, considerable work is being done on the Trans-Ohio divisions. The improvements are being made with a view to using 70-ton locomotives on all portions of the line, and since July 9, 290 tons of 75-lb. and 12,943 tons of 85-lb. steel rails have been laid on the Central Ohio. Lake Erie, and Chicago divisions. About 17 miles of new side tracks have been constructed, five telegraph towers erected, a new freight station built at Mansfield, O., an interlocking plant installed at Plymouth, O., and five water stations constructed. Further improvements of a more extensive character are being planned, in order to materially increase the ton mile haul. W. T. Manning, Ch. Engr., Baltimore, Md.

BROOKVILLE, PA.—G. W. Smith, Corsica, Pa., informs us that he has the contract to build about two miles of railway for this company to be used for logging purposes. Levi Heidrick, Pres., Brookville, Pa.; F. M. Ashmead, Ch. Engr., 11th and Pike Sts., Pittsburg, Pa.

CAPE FEAR & YADKIN.—Reports state that this railway was sold at auction in Fayetteville, N. C., Dec. 29, to the Atlantic Coast Line, at $3,110,500.

CHICAGO, ROCK ISLAND & PACIFIC.—W. E. Dauchy, Supt. of Maintenance and Construction, Topeka, Kan., informs us that this company is at present building an extension from Chickaska, Ind. Ter., to a point 50 miles west. The contractors are: Oruch & Lee, Kansas City; Andrew Sheridan, St. Joseph, Mo.; J. A. Ware, Sedalia, Mo.; Mr. Craney, Paris, Tex.

CHICAGO TERMINAL TRANSFER.—Surveys have been made for the construction of an extension to this line in the spring, from Harvey to Chicago Heights, Ill., a distance of nine miles. Another extension is also projected from Franklin Park to Mayfair, Ill., a distance of 6¾ miles. F. E. Paradis, Ch. Engr., Chicago.

CHICKASAW CENTRAL.—The Chicasaw Legislature has passed a bill granting a charter to the Chicasaw Central R. R. Co., to build a line through the lands of the Chickasaw Nation, from a point near the bridge on the Colbert (Ind. Ter.) road in a northwestern direction through the towns of Emet and Tishomingo, on the Canadian River to the northern boundary of the Chickasaw Nation. The incorporators are: Ex-Governor R. M. Morris, William Rennie, M. V. Cheadle, Charles D. Carter, Treas. P. S. Mosely, of the Chickasaw Nation; ex-Governor William Byrd and associates. The line will tap some of the finest agricultural and mineral lands in the Chickasaw Nation, and will have important connections both north and south.

CLEVELAND, CANTON & SOUTHERN.—The sale of this railway has been postponed from Feb. 2 to Feb. 4, the sale to take place in Cleveland, O. H. T. Carlton, Special Master Comr.

COLUMBUS, BLOOMINGTON & TERRE HAUTE.—This company was incorporated in Ohio, Dec. 29, with a capital stock of $100,000, to build an 85-mile line between the points named. The principal office will be at Bloomington, Ind. The incorporators are: Charles W. Shaw, John I. Bennett, P. B. Willoughby, Lon Giles, John Field, Mano Abbott, Joseph H. Daniels, Eli Boruff, John Bryant, Frank Moore, William N. Johnson, Edmond Allgood, Henry Myers, Martin L. Roush, Samuel Webb, George B. Giles and Frank Forsyth, all of Bloomington, Ind.

COLUMBIA & KLICTITAT.—This company has been incorporated in Washington, with a capital stock of $300,000, to build a line from Lyle, Klictitat county, on the Columbia River, to Goldendale, Wash., a distance of about 30 miles. The incorporators are: E. E. Lytle, E. C. O'Reily and A. E. Hammond.

COLUMBUS, LIMA & MILWAUKEE.—J. G. W. Cowles, Pres., Cleveland, O., informs that 40 miles of railway between Lima and Defiance, O., are now being constructed. Grading has been completed, and rails are being laid. The principal contractor is Andrew Bruon, Ottawa, O.; C. D. Hobart, Ch. Engr., Xenia, O.

DALLAS, FORT WORTH & GULF.—Reports state the Dallas Terminal & Union Depot Co., Dec. 27, decided to change its name to the above, and to issue $1,000,000 of 5% bonds to procure money to be used for the immediate construction of the western division of the line, from Dallas to Fort Worth, Tex., 32 miles. F. W. Steber, Ch. Engr., Dallas, Tex.

ECUADOR.—Press reports state that an American syndicate has obtained the right to build a railway in Ecuador, connecting the sea-coast belt with the rich interior, heretofore almost cut off from the outside world. The details of the contract have not been officially published, but United States Consul-General De Leon, at Guayaquil, has supplied the State Department with much detail respecting the enterprise, which, in his opinion, is likely to lead to the complete reformation of the country.

EMPIRE LUMBER CO.—The Empire Lumber Co., Winona, Minn., informs us that preliminary surveys are now being made for the proposed line to be built from Dedham to the Black River region. It will be used only as a logging road.

GULF, LOUISIANA & GREAT NORTHERN.—Wheeler & Boody, 222 South 3d St., Philadelphia, Pa., general contractors for this line, informed us that sub-contracts will be let by them before Jan. 15. The proposed route of that part of the line under contract is from Arcadia to Vermillion Bay, La., via Bienville, Montgomery, Colfax, Pineville, Alexandria, Abbeville and Southwest Pass, a distance of 270 miles. Jos. J. Waitz, Pres., Alexandria, La.

JAMESTOWN & CHATAUQUA.—This company has been incorporated in New York, with a capital stock of [illegible]5,000. The company is a reorganization of the Jamestown & Lake Erie Ry. Co., which was sold under foreclosure on Nov. 1. The directors are: William A. C. Ewen, Dobbs Ferry, N. Y.; William I. Quintard, S. Reading Bertron, L. C. Herckenrath, McK. D. McKee, Walter S. Jenks and Cahrles A. Watrous, New York; Richard S. Storrs, Orange, N. J., and E. G. Woodling, Cranford, N. J.

KNOXVILLE & SEVIERVILLE.—An application has been filed in Kentucky for a charter for this company by John M. Ross, J. C. Monday, Abner Monday, Jesse S. Cottrell and H. T. Cooper.

LACKAWANNA LUMBER CO.—Ora L. Nichols, Ch. Engr., Coudersport, Pa., informs us that this company intends to build eleven miles of steam railway for lumbering purposes only, and that construction will be done by the company next spring. T. L. Peck, Pres., Scranton, Pa.

LANCASTER & READING.—Press reports state that the Pennsylvania R. R. Co. has bought this narrow-gage line, between Lancaster and Quarryville, Pa., a distance of 15 miles. Four miles from Quarryville is the Lancaster, Oxford & Southern Narrow-Gage R. R., and it is thought that the Pennsylvania will extend the Quarryville line to meet that line, because it joins the Pennsylvania at Peach Bottom, Md. C. H. Locher, Pres.; M. Reilly, Supt., both of Lancaster, Pa.

MANCHESTER CONNECTING.—This company was incorporated in Pennsylvania, Jan. 3, with a capital stock of $20,000, to construct a steam railway to serve as a connecting link between the Cleveland & Pittsburg Ry. and the Pittsburg & Western Ry. The incorporators are: Frank B. Smith, Pres., and Severn P. Ker, of Sewickley, Pa.; John L. McCutcheon, Pittsburg; Thos. G. McCutcheon, Allegheny, Pa.

MEXICO.—Press reports state that A. B. Smith, Los Angeles, Cal., and others have just received a concession from the Mexican Government, giving them control of a large tract of land on the Gulf of California. One of the agreements is to construct a railway to Yuma.

MISSOURI MIDLAND.—It is announced that this company will build a new standard-gage line from Columbia, Mo., to a connection with the Missouri, Kansas & Texas Ry., a distance of about 25 miles. Walter Williams, Chn. of Com.; S. F. Conley, Secy.

NORTHWEST.—Isaac E. Blake, Pres., 11 Broadway, New York, informs us that the surveys have been completed, rights of way obtained and the capital secured for this proposed railway from Nagle to Oxbow, Ore., via Connor Creek, Flickbar, Powder, Pine, etc., 73 miles. Grading and track-laying is being done by the day. A portion of the work will be contracted for in January. Carlos Gillespie, Ch. Engr., Huntington, Ore.

OGDENSBURG & LAKE CHAMPLAIN.—Reports state that surveys are being made for a connecting link with the Boston & Maine R. R., between Rouses Point and Swanton, N. Y., requiring the erection of a bridge over Lake Champlain, near the present bridge of the Grand Trunk Line. F. R. Becker, Ch. Engr., Ogdensburg, N. Y.; George Parsons, 15 Broad St., New York.

OREGON R. R. & NAVIGATION.—William Winters, of Butte, Mont., is reported to have been awarded a contract for the construction of an extension to this line, from the Clearwater River district to Lewiston, Idaho. W. H. Kennedy, Ch. Engr., Portland, Ore.

PORT ANGELES EASTERN.—This company has been incorporated in Washington, with a capital stock of $500,000, to construct and equip a line of standard-gage railway from Port Angeles easterly to a point at or near Junction City, Jefferson county. The amount of the capi-

tal stock is $500,000. The trustees until May 1 are: William Martell, Port Angeles, Wash.; John Lehman, Chicago; Arthur Shute, Ellsworth, Me.; Isaac C. Atkinson, Boston, Mass.

REDWOOD & RAILROAD CO. OF CALIFORNIA.—This company was incorporated in Oregon, Dec. 29, with a capital stock of $2,500,000, to do a lumber business, to operate a railway, etc. The incorporators are: J. R. Foster, R. L. Durham, C. F. Beebe, W. S. Mason, J. McCracken, Portland, Ore.; Phil. Metschan, Salem, Ore.

ST. LOUIS & NORTH SHORE LINE.—This company was incorporated in Illinois, Jan. 2, with a capital stock of $25,000,000, to build a line from a point near Grove, to East Clinton, with a branch from Geneseo to Moline, Ill. From East St. Louis the track will be laid to Peoria, via New Holland; also a line from Springfield to Chicago. The incorporators are: J. B. Cavanaugh, H. M. Taylor, G. M. Harvey, J. W. Kilmore, Huston C. Adcock and others. The proposed line is supposed to be an extension of the St. Louis, Peoria & Northern.

SISTERSVILLE, PENNSBORO & BURNSVILLE.—This company was incorporated in West Virginia, Dec. 23, with a capital stock of $200,000, to construct and operate a railway from Sistersville, Tyler county, to Burnsville, Braxton county, W. Va. The principal office is to be at Burnsville. The stockholders are: M. K. Duty, L. P. Wilson, J. V. Dotts, J. B. Wilson, B. F. Wilson, W. B. Kelly and H. H. Broadwater, all of whom are residents of Ritchie county.

SNAKE RIVER VALLEY.—W. H. Kennedy, Ch. Engr., Portland, Ore., informs us that work is already under way for the entire distance on this proposed line between Wallula Junction and Grange City, Ore., 67 miles. The construction is being done by different contractors in sections of from one to two miles in length. W. W. Cotton, Pres., Portland.——Reports state that Mendenhall & Deal, of Springville, Utah, have been awarded a contract for building a two-mile section for this company from Wallula Junction to Riparia, Wash. The work consists of a heavy rock cut and will last eight of nine months.

SOMERSET.—R. W. Dunn, Pres., Waterville, Me., informs us that nothing has yet been done towards building the extension of this line from Bingham, Me., to Moosehead Lake, about 30 to 35 miles, except to apply to the legislature for the necessary charter. The chief object of the extension is to get into the lumber country for lumber freight and pulp wood. It is doubtful if the line be completed to the lake for some years.

WICHITA & WESTERN.—Reports state that this railway has been bought by the Atchison, Topeka & Santa Fe Ry. Co., at public auction at Kingman, Kan., at $75,000. The line runs from Wichita to Pratt, and is about 80 miles in length. J. H. McEntire, Receiver, Wichita, Kan.

WILLIAMSVILLE, GREENVILLE & ST. LOUIS.—W. H. Hipolite, Ch. Engr., Poplar Bluff, Mo., informs us that this company expects to construct a four-mile extension of its railway, running from Williamsville to Greenville, 25 miles. Bids are now being received for the construction of a 150-ft. steel span over St. Francis River on the main line. C. C. Rainwater, Pres., 3 Equitable Bldg., St. Louis, Mo.

YELLOWSTONE PARK.—This company has been incorporated in Montana, with a capital stock of $1,500,000 by W. D. Turner and George Turner, of Spokane, Wash; and Frank A. Hall, of Bozeman, Mont., the same men who have built the nine-mile road from the Northern Pacific Ry. into the Trail Creek coal district. The company proposes to build a line from Brisben, in Park county, west by way of Trail Creek, Meadow Creek, Bozeman and Ferris Hot Springs, and south from Ferris Hot Springs up the West Gallatin River to Dodge Creek, and thence west up Dodge Creek 10 miles. It is also proposed to build the line from Ferris Hot Springs north to a point near the Flathead pass, north of Bozeman. A part of the line up the West Gallatin has been surveyed.

STREET AND ELECTRIC RAILWAYS.

BIDDEFORD, ME.—Bids will be received by the Sanford & Cape Porpoise R. R. Co. until May, according to reports, for the construction of an electric railway from Biddeford to York Beach; estimated cost, $4,000. Percy A. Richardson, Ch. Engr., Portland, Me.

HOLBROOK, MASS.—The selectmen of this town have granted a franchise to the Holbrook & Weymouth Ry. Co., to construct a street railway from Holbrook Square through Plymouth and Weymouth Sts. to the Weymouth line. The line will be the connecting link between the Brockton and the Weymouth & Braintree Ry., and will be a part of the new short route from Brockton to Nantucket. It is said to be the intention of the company to commence construction early in the spring.

LEXINGTON, MASS.—The Lexington & Boston St. Ry. Co. has been organized, with a proposed capital stock of $170,000, to run a line from the terminus of the Boston Elevated Ry. at Arlington Heights to the Bedford line, with a branch through Forest and Waltham Sts. to Waltham. A hearing will be given in Lexington on Jan. 7. The directors are: Alfred Pierce and G. W. Sampson, Lexington; Charles W. Smith and Alden E. Viles, Boston; Walter H. Pierce, Arlington; Marcus A. Coolidge, Fitchburg, Mass.

MILFORD, MASS.—Edward Price, Warren, Mass., is said to have been awarded the contract for building the extension to the power house of the Milford, Hollister & Framingham St. Ry. Co. The addition will be 25 × 80 ft., and there will be installed therein a new 500-HP. Slater engine and a 150-HP. boiler.

NORTHAMPTON, MASS.—The incorporators of the Western Hampshire Electric Ry. Co., organized at this place, Dec. 24, with the following officers: John C. Hammond, Pres.; J. A. Sullivan, Treas.; H. P. Field, Clk. A line through Williamsburg, Goshen, Cummington, Ashfield and other towns is projected, but no immediate prospects for building are apparent.

REVERE, MASS.—George Forbush, Chas. E. Folsom and others have applied to the selectmen for a franchise to build an electric line along the water front from the Winthrop line to Crescent Beech reservation.

TEMPLETON, MASS.—P. Blodgett, Templeton, informs us that nothing has yet been done towards building the proposed Templeton St. Ry. from Gardner to Templeton, a distance of 5 miles. F. Greenwood, Pres., East Templeton, Mass.

WALTHAM, MASS.—The board of aldermen, Dec. 28, granted a franchise to the Lexington & Boston St. Ry. Co., to construct a line on Lexington St., from Main and Lexington Sts., to the Lexington town line. The company must have the line completed and the cars running by Aug. 1. See item under Lexington, Mass.

DANBURY, CONN.—It is reported that C. C. Higgins, 69 Wall St., New York, and Hiram B. Scott, Ridgefield, Conn., are interested in a projected railway to be built between Danbury and Portchester, N. Y., 35 miles, in the coming spring.

DERBY, CONN.—Reports state that the New York, New Haven & Hartford R. R. is about to begin a number of improvements in this city, and that it is also proposed to adopt the third-rail electric system on the New Haven & Derby division between New Haven and Ansonia.

NYACK, N. Y.—Reports from Nyack state that John Hull Browning, formerly president of the Northern R. R. of New Jersey, has a plan for the construction of a trolley line from Englewood, N. J. along the slope of the Palisades to Nyack.

HOBOKEN, N. J.—Press reports state that the North Hudson County Ry., which tapped the northern part of Hudson county, has passed under the control of the North Jersey St. Ry. Co., of Newark, N. J.

PLAINFIELD, N. J.—The council granted a franchise to the Plainfield St. Ry. Co., Dec. 29, giving permission for the construction of an extension of its lines to Scotch Plains. T. Nevins, Pres.

RUTHERFORD, N. J.—Press reports state that Senator William N. Johnson, Receiver of the Union Traction Co., has been ordered by the Court of Chancery to sell the roadbed, cars, fixtures, building, etc., belonging to that company in Hudson and Bergen counties. The railroad is in operation from North Arlington to Woodridge, a distance of eight miles. The Union Traction Co. secured right of way as far north as Hackensack, but owing to the demand of this town for $50,000 for right of way, which the company would not pay, it went into a receiver's hands. It is reported that at least four competitors will bid at the sale on Jan. 27.

EASTON, PA.—The Easton & Nazareth St. Ry. Co. was incorporated in Pennsylvania, Dec. 30, with a capital stock of $60,000, to construct an electric line between Easton and Nazareth. The incorporators are: Wm. O. Hay, Pres.; Edward J. Fox, Robt. A. Stofflet and Thos. A. H. Hay, all of Easton; Chas. H. Cox, Bethlehem, Pa.

NEWCASTLE, PA.—The Youngstown & Newcastle Electric Ry. Co. was incorporated Dec. 29, with a capital stock of $75,000, to construct a line between Newcastle and the Ohio State line. The incorporators are: David L. Miller, Pres.; Edward P. Geary, Wm. H. Miller, Jas. A. Mussina and Geo. L. Miller, all of Lock Haven, Pa.

POTTSTOWN, PA.—George F. P. Wanger, Ch. Engr. of Montgomery & Chester Electric Ry., Pottstown, Pa., informs us that surveys are now being made for this proposed line between Phoenixville and Spring City, six miles. As stated in our last issue, the contract is held by the Fairmount Construction Co., 723 Walnut St., Philadelphia. John J. Ridgway, Pres., Philadelphia.

ROCKVILLE, MD.—The commissioners of Montgomery county have granted a right of way to the Washington & Rockville Ry. Co. over part of the Rockville & Bethsada Turnpike.

WASHINGTON, D. C.—The district commissioners have refused to permit the Capitol Ry. Co., A. E. Randle, Pres., to install the Brown system of electric motive power on its 11th St. line.

NEWPORT NEWS, VA.—The Newport News & Old Point Ry. & Electric Co. contemplates the construction of four miles of extensions in this city and the erection of a new power house. W. J. Payne, Pres.

MIAMI, FLA.—Reports state that J. A. McDonald is interested in the construction of an electric railway between this city and Lemon. No immediate work is intended.

DAYTON, O.—The Dayton, Springfield & Urbana Electric Ry. Co. has been authorized to increase its capital stock from $10,000 to $75,000. No portion of the line has yet been built. Fred. Colburn, Pres.; John G. Webb, Secy.

HAMILTON, O.—Hamilton & Eaton Electric St. Ry. has applied to the county commissioners for a franchise to build a double-track line to Hamilton. Work is expected to begin in the spring. J. E. Anderson, Pres., Eaton, O.; J. A. Hollenberger, Treas.

ALEXANDRIA, IND.—L. Grover, Anderson, Ind.; R. H. Hannah, S. E. Young and others, of Alexandria, are said to be interested in the proposed electric line from Alexandria to Hartford City.

CORUNNA, MICH.—It is reported that H. C. Main, of Owosso, Mich., has gone to Durand to begin the work of surveying for the Long Lake, Durand & Corunna Electric Ry. beginning at the western limits of that village the survey will extend over the course of the road to this city. Just how much work will be done this winter is yet undecided, but in the early spring the construction will be pushed with a view of having a through line from West Owosso to Durand on or before July 1.

PONTIAC, MICH.—It is reported that the township board of Rochester has granted a franchise to John Winters and O. H. Law, of Detroit, for an electric line to Pontiac.

LEAVENWORTH, KAN.—F. N. Wilcox was granted a franchise, Dec. 23, for the construction of an electric railway from Kansas City to Leavenworth, via Bethel. Work must begin by April and be completed by Jan., 1900. The Kansas City & Leavenworth Traction Co., of which W. E. Winner is the promoter, was given a franchise to build a like road not long ago by the commissioners of Wyandotte county and similar franchises were secured by the traction company in this county.

ST. CHARLES, MO.—Reports state that James Houseman, Jr., Pres. of St. Louis, Creve Coeur & Wellston Ry. Co., will probably build a line in this city.

PASADENA, CAL.—Bids are asked by the city clerk until Jan. 17 for the purchase of a franchise to construct and operate a single-track street railway in this city. The Los Angeles Terminal Ry. Co. has applied for the proposed franchise.

RIVERSIDE, CAL.—The Riverside & Arlington Ry. Co. has filed a request for a franchise to build a line up 7th St. to Park Ave., and thence to Victoria Hill. S. C. Evans, Pres.; G. O. Newman, Mgr. and Ch. Engr.

ELECTRIC LIGHT AND POWER.

BRANDON, VT.—Bids for the proposed water power plant will soon be received, according to reports.

BOSTON, MASS.—The contract for extending the electric lighting plant at the Navy Yard has been awarded to the Thresher Electric Co., Dayton, O., at $16,060.

MEDWAY, MASS.—The Medway Electric Light & Power Co. has applied to the state commissioners for permission to issue stock to the amount of $15,000 for the generation and sale of electric light and power.

SPRINGFIELD, MASS.—The city government, according to reports, will probably make a new 5-year contract with the United Electric Co.

ALBANY, N. Y.—The supervisors have, according to reports, authorized a committee to enter into contract for or to establish an electric light plant for lighting the county buildings. Jas. J. Gorman, Chas. L. Weaver, Carroll Coon, John W. Veigele, and W. F. Kearney, Jr., Comrs.

FAR ROCKAWAY, (L. I.). N. Y.—The Queens Borough Electric Light & Power Co., has, according to reports, filed plans for a new plant at this place, to cost $30,000. D. H. Valentine, Pres. John C. Sheehan and John Carroll are said to be interested.

NEW YORK, N. Y.—Bids will be received until January 14, for extending the electric light system at the Navy Yard, New York. M. T. Endicott, Ch. of Bureau, Navy Dept., Washington.

NEW YORK, N. Y.—The following bids were received for electric light plants for fire boats: John J. Scannell, Fire Comr., 159 East 67th St.; (a) the "Robt. A. Van Wyck," (b) "Zophar Mills," (c) "New York:" Commercial Construction Co., Madison Ave., (a) $3,200, (b) $3,150, (c) $2,925; General Electric Co., 44 Broad St., (a) $2,782, (b) $2,787, (c) $2,795; Sprague Electric Co., 20 Broad St., (a) $2,675, (b) $2,575, (c) $2,625. The contract was awarded to the General Electric Co., the lowest regular bidder, as the Sprague Electric Co. did not bid on General Electric engines, single-cylinder, vertical pattern, which were required in the specifications.

NIAGARA FALLS, N. Y.—It is reported here that J. J. Miller, of the Miller Electric Co., has perfected a plan for the erection of a power plant at this place. His intention is to build a power boat of steel, 600 × 100 ft. and six stories high; estimated cost, $300,000.

CAMDEN, N. J.—It is reported that the Camden City Council will re-award the contract for electric lighting to the Camden Lighting & Heating Co.

SEA BRIGHT, N. J.—Prichard & Williams have been awarded the contract for the new power house, 30 × 50 ft., for the Sea Bright Electric Light Co.

DOYLESTOWN, PA.—The erection of an electric plant at this place is contemplated.

MILL HALL, PA.—It is reported that the projected electric light station will be erected soon. S. T. Henderson is interested.

PECKVILLE, PA.—The Borough Council is considering the issuance of $5,000 in bonds to complete the electric light system.

ANNAPOLIS, MD.—John H. Bright, Jr., Chn. of Light Com., informs us that no steps have been taken towards a plant. A contract with the Annapolis Gas & Electric Co., present contractors, is being considered. Harry Miller, official in charge.

WILLIAMSPORT, MD.—Plans for an electric plant have been submitted to the council by C. H. Addsperger, of Baltimore. The issuance of $20,000 in bonds is proposed.

WASHINGTON, D. C.—The following bids have been received by the treasury department for furnishing combination gas and electric light fixtures for the post office building in this city: R. Hollings & Co., Boston, Mass., $45,085; Barber & Ross, Washington, $21,567.35; Horn & Brannen Mfg. Co., Philadelphia, $19,454.50, $20,166.50 and $25,322; C. C. Vosburg Mfg. Co., Brooklyn, N. Y., $35,564.10 and $26,782.25; B. Golz Mfg. Co., 247 3d Ave., New York, list prices; Bradley & Hubbard Mfg. Co., Meriden, Conn., $11,377.95, and list prices; Cassidy & Son Mfg. Co., New York, $21,915.50; $29,941 and $28,061.——It is reported that all overhead wires for lighting purposes within the fire limits of the District will be removed and placed underground and the conduits extended.

BANISTER, VA.—Reports state that the Banister-Dan Mills Co. contemplates putting in an electric light plant at the Banister mills, with sufficient power to light the streets, churches, residences and business houses of the town of Houston, Va.

RICHMOND, VA.—William Todd, Asst. Mgr., Virginia Electrical Ry. & Development Co., informs us that bids will probably be received before Feb. 1 for the proposed electric light plant, with a capacity of 7,000 HP., 4,000 HP. of which will be installed at once; estimated cost, $700,000. Smith & Fisher, Des. Engrs.; Edward J. Willis, Electrical Engr., both care of James River Construction Co., Richmond, Va.

WHEELING, W. VA.—The Wheeling Electrical Co., it is reported, will make extensive improvements to its plant.

DAYTON, O.—The council has passed a resolution directing the city engineer to report an estimate of the cost of constructing an electric light plant complete in this city. Frank M. Turner, Cy. Engr.

DILLSBORO, IND.—The question of building an electric light plant is being agitated.

FAIRMOUNT, IND.—The council has leased the electric lighting plant of Gilbert La Rue with the privilege of purchase in ten years.

FRANKLIN, IND.—Stickler & Son have asked the county for a franchise to build an electric lighting plant at this place.

MOUNT VERNON, IND.—Bids are asked by this city until Jan. 17 for lighting this city for ten years, from July 25, 1899. Edward E. Highman, Isaac Wolf and Robert V. Stinson, Committee.

ALBION, MICH.—The Albion Electric Light Co. is said to contemplete making improvements to its plant. E. P. Robertson, Pres.

GRAND RAPIDS, MICH.—The plans and estimates for an electric light building have been submitted to the board of public works, and Secretary Twamley was instructed to advertise for bids. Mr. Lohman, Arch.

LAWTON, MICH.—The contract for the lighting apparatus for the new plant has been awarded the General Electric Co., Chicago, Ill., and the power plant to the Wray-Austin Machinery Co., Detroit, Mich; estimated cost, about $5,000.

ZEELAND, MICH.—The council is said to be considering the question of municipal electric lighting.

UPPER ALTON, ILL.—It is reported that the Upper Alton electric lighting system is to be rebuilt. J. F. Porter, Pres., Alton Ry. Illuminating Co., 205 Market St., Alton, is interested.

CHICAGO, ILL.—The East Chicago Light & Power Co. has been organized for the purpose of building and operating an electric lighting plant. The contracts have been let to Geo. W. Wilson & Co., Chicago. The plant is to have a capacity of 50 arc. lights of 2,000-c. p. each, and 1,000 incandescent lights, with surplus capacity of about 40% for future extensions; estimated cost, $34,500.

EVANSTON, ILL.—The Evanston Electric Illuminating Light Co. contemplates placing its wires underground and improving its plant at a cost of $25,000.

FORT MADISON, IA.—The people of this place will vote upon the proposition of Elijah Coffin, secretary of the gas company, to furnish the city with gas, water and electric light for 25 years, after which the plants are to become city property.

HUMBOLDT, IA.—The people here have voted to permit a home electric lighting plant to be put in and operated for 25 years.

ALBERT LEA, MINN.—This city has, according to reports, appointed a committee to investigate the problem of city ownership of the electric light plant.

MINNEAPOLIS, MINN.—The St. Anthony Water Power Co. has awarded the contract for the equipment of the power house at the lower dam, which includes placing three water-wheels with corresponding electrical equipment, thus increasing the power from 7,000-HP. to 10,000-HP., to the General Electric Co., New York, at $100,000, to be completed by July 1.

MINNEAPOLIS, MINN.—Bids will be received by the city clerk until Jan. 13 for electric, gas and gasoline lighting.

THIEF RIVER FALLS, MINN.—R. G. Willard, Duluth, Minn., has made a proposition to furnish an electric light plant of 600 lights, for $62,500, according to reports.

CENTRAL CITY, NEB.—M. G. Merrell, Cy. Clk., informs us that the city does not contemplate the erection of a municipal plant.

HASTINGS, NEB.—Reports state that this place is considering the question of erecting an electric light plant.

HURON, S. D.—This place contemplates the erection of a municipal electric light plant, according to reports.

OREGON, MO.—Bonds for $3,000 have been sold for the improvement of the electric lighting plant at this place, according to reports.

DENVER, COLO.—The board of capitol managers contemplates increasing the lighting capacity of the capitol plant.

PALOUSE, WASH.—Reports state that Codd & McKenzie, owners of the Colfax electric light plant, have made a proposition to the council to move its plant to this place.

PORTLAND, ORE.—It is rumored that the projected electric plant will be located at Mount Tabor, between the upper and lower reservoirs.

BERKELEY, CAL.—It is reported that Edwin L. Fish, lessee of the San Leandro Gas & Electric Light Works, has secured a lease of the Haywards Electric Light Co.'s plant, and will operate the plants together and make extensive improvements thereto.

GRASS VALLEY, CAL.—The question of installing a city electric light system is being considered.

MONROVIA, CAL.—The city is considering the question of erecting a municipal plant, according to reports.

PALO ALTO, CAL.—A petition has been presented to the trustees to the effect that the surplus of the $40,000 voted for sewers be used in the immediate establishment of an electric light plant. C. E. Moore, Engr.

SAN BARNARDINO, CAL.—Meyberg Bros., Los Angeles, Cal., have been awarded the contract for furnishing gas and electric fixtures for the new court-house at $1,275. ——The Redlands Electric Light & Power Co. has petitioned the board of supervisors for a franchise to construct and maintain a line of poles and wires.

SANTA MONICA, CAL.—The contract for lighting for 1899 has been awarded to the Santa Monica Light & Power Co., according to reports.

STOCKTON, CAL.—An ordinance has been passed granting the Standard Electric Co. of California, the right to construct, maintain and operate a general electric light, heat and power system in this city.

ST. HELENA, CAL.—Reports state that a franchise has been granted to the St. Helena Light & Power Co. to erect a plant in this city.

PROVO, UTAH.—It is reported that this city will purchase the Provo Woolen Mills electric light plant and franchise from Reed Smoot, for $4,000.

HULL, QUE.—R. W. Farley, Cy. Engr., informs us that bids will soon be asked for two dynamos of 50-light capacity each, 8 miles of No. 26 wire, switch board, etc., for station equipment, and 75 double-carbon lamps of 1,200-c. p., for the proposed electric light plant, for which $8,000 has been voted.

KEMPTVILLE, ONT.—It is reported that this town is considering the question of building an electric lighting plant.

ORILLA, ONT.—The following bids were received for the proposed electrical power transmission plant. P. H. Patriarche, for the whole equipment, including electrical apparatus of the Royal Electric Co.'s manufacture, at $66,680 ,and the Central Construction Co., Buffalo, N. Y., including Westinghouse electrical apparatus, at $67.200.

OTTAWA, ONT.—The government has awarded William Stewart the contract for building the power house at the Soulanges Canal. It is reported that the contract for the electrical equipment has been awarded to the Canadian General Electric Co., Toronto.

PRESCOTT, ONT.—J. B. White, Corporation Clk., informs us that bids will probably be received in January and February for an electric lighting plant to supply 90 arc lights of 2,000-c. p., 1,500 incandescent lights of 16-c. p., to cost about $15,000. John Galt, Engr., Toronto.

NEW COMPANIES.—Modern Electric Light Co., Kittery, Me.; $300,000; to manufacture and sell vapor gas; J. W. Chase, Pres., Durham, Mass.; Joseph G. Taylor, Treas., Denver, Colo.

American Electrical Extract Co., Portland, Me.; $3,000,000, commencing with $60; to manufacture extracts; G. D. Burton, Boston; L. H. Williams, Somerville, Mass.

Electric Power Development Co., New Jersey Corporation Guarantee and Trust Co.'s Bldg., Camden, N. J.; $500,000; to manufacture and supply electricity to municipalities, etc.; Marcus B. Taylor, Charles W. Kennedy, Isaac Blum, Wm. Findlay Brown, S. Y. Heebner.

The Washington Lighting Co. of Ohio, Cleveland, O.; $600,000, commencing with $500; C. W. Turner, Chas. Perillat, Boston, Mass.; L. W. Loomis, G. G. Souden, C. T. Hassbrouck, Cleveland, O.

The Richmond Electric Light Co., Frankfort, Ky.; $10,000; to manufacture all kinds of electric appliances; J. W. Crook.

Magic Light Co., Chicago, Ill.; $2,700; Franz Gersdorff, Henry Ressing and Charles Fritz.

People's Light Co., Greenville, Miss.; $15,000; Harry Metcalfe, Fred Metcalfe, George Metcalfe, Lucien C. Gwin, Mary L. Wheatley and George Wheatley.

Tuolumne County Water & Electric Power Co., Columbia, Cal.; $550,000; J. W. Ellis, Wm. Mansfield, M. B. Harriman, Geo. Wight and Geo. W. Hale.

BRIDGES.

BOSTON, MASS.—Bids are asked until Jan. 16 for constructing the abutments of a bridge on Boston St. and New York, New Haven & Hartford R. R.; surety, $1,000. William Jackson, Cy. Engr.

HOOSICK FALLS, N. Y.—Bids are asked by the village trustees until Jan. 7, for constructing stone abutments for a bridge at North Hoosick.

NEW YORK, N. Y.—Franchises and estimates have been secured by the New York Connecting Ry. Co., Oliver W. Barnes, Pres., for the construction of a steel bridge and viaduct 800-ft. span and 150 ft. above the water; estimated cost, $4,000,000; from Port Morris to Astoria, by way of Randall's Island, according to reports. John W. Ambrose is also interested.

SYRACUSE, N. Y.—The board of aldermen have adopted a resolution to appropriate $6,000 for a steel girder bridge across Onondaga Creek, on West Fayette St.

WATERTOWN, N. Y.—We are informed that $5,000 has been appropriated for the repair of the Court and Factory St. bridges. Plans have been secured and the contract will be let during January. C. O. McComb, Cy. Engr.

SPRING LAKE, N. J.—Bids will soon be asked by the county freeholders, Freehold, N. J., for constructing a steel and iron bridge over Wreck Pond; appropriation, $14,000. W. F. Lefferson, Chn. Com.

TRENTON, N. J.—Reports state that the railroads and canal company are preparing to construct a new bridge over the canal at Broad St.

CHESTER, PA.—The county commissioners, Media, Pa., have received the following bids for constructing an iron bridge, 163 ft. long and 52 ft. wide, over Chester Creek, at 9th St.: King Bridge Co., Cleveland, O. (accepted), $44,965; Wrought Iron Bridge Co., Canton, O., $49,742; Penn Bridge Co., Beaver Falls, Pa., $49,220; Bracket Bridge Co., Cincinnati, O., $47,898; Phoenix Bridge Co., Phoenixville, Pa., $46,850; Berlin Iron Brodge Co., East Berlin, Conn., $53,000; Groton Bridge Co., Groton, N. Y., $54,850.

BALTIMORE, MD.—The council has passed an ordinance authorizing the Baltimore Steam Packet Co. to construct a covered bridge over Light St. John W. Sherwood, Mgr.

ERIE, PA.—The Cascade Bridge Co. has been incorporated at this place, with a capital stock of $50,000, to construct bridges. C. H. Strong, J. R. Craig, H. G. Douglas, M. B. Gunnison and S. C. Walker, of Erie, incorporators.

PHILADELPHIA, PA.—We are informed that S. Gourley, Jr., Philadelphia, bid $4,957 and Delaplaine & West, $6,392, instead of the reversed order of amounts, as stated in our last issue.

CLARKSVILLE, TENN.—The Clarksville & Russellville Bridge Co., Clarksville, has been incorporated; capital stock, $5,000; C. P. Warfield, John D. Moore, T. N. Walthal, Martin Elder and H. C. Merritt are the incorporators.

CARROLLTON, KY.—J. J. Orr writes us that a charter has been secured and that a company is being organized for the construction of a bridge to cross the Kentucky River at this place. About $40,000 has been subscribed. The structure will be a single span 300 ft. long by 20 ft. wide, of iron or steel, foundation of stone pillars; estimated cost, $75,000. Address M. I. Barker, Carrollton.

SHELBYVILLE, IND.—The county commissioners have awarded contracts to the New Castle Bridge Co., at $19,004 and A. E. Smiley, Rushville, Ind., at $15,375, for the construction of three bridges each.

BENTON HARBOR, MICH.—R. P. Chaddock informs us that a contract has been awarded to G. A. Allmendinger, of Benton Harbor, at $2,225, for repairing the wooden and steel bridge over the St. Joseph River.

GRAND RAPIDS, MICH.—The council has passed a resolution to obtain the cost of constructing a new steel or iron bridge at Bridge St., and include the cost in the next annual budget.

NEW MUNSTER, WIS.—The county supervisors, Kenosha, Wis., have awarded a contract to the Canton Bridge Co., Canton, O., for constructing a 140 × 16-ft. bridge, according to reports.

ST. PAUL, MINN.—The two spans of the East Sixth St. bridge, recently wrecked, will probably be repaired about the middle of March; estimated cost, $15,000. L. W. Rundlett, Cy. Engr.

CORYDON, IA.—Bids are asked until Jan. 10 for constructing steel bridges for the year 1899, according to reports. W. E. Dennis, County Audr.

ST. JOSEPH, MO.—Bids are asked, April 1, for constructing the substructure of the Grand Ave. viaduct. H. Fernstrom, Ch. Engr., Chicago Great Western Ry., St. Paul, Minn. We are informed that a contract for the superstructure, 170 ft. long and 20 ft. wide, has been awarded to Hoff Bros., Minneapolis, Minn. The work is under construction in the shops, and will be completed by April 1.

McMINNVILLE, ORE.—Bids are asked until Jan. 5 for constructing three bridges. J. H. Nelson, County Clk.

SAN FRANCISCO, CAL.—Quimby & Harrelson have been awarded a contract, at $21,895, for constructing a concrete arch bridge at Berkshire St. and Southern Pacific R.R. J. A. Russell, Clk. Bd. County Supervisors.

SANTA MONICA, CAL.—A petition was presented to the city trustees, Dec. 19, to call an election for the purpose of submitting a proposition to the voters, to issue bonds for the construction of a bridge on Ocean Ave., south of Railroad Ave.

STOCKTON, CAL.—Reports state that plans are being prepared by the San Francisco & San Joaquin Valley Ry. Co. for the construction of a steel draw bridge 240 ft. long, across the San Joaquin River, west of Stockton. Also that a steel viaduct half a mile long, will be constructed over Alhambra Valley. W. B. Storey, Gen. Supt. and Ch. Engr., San Francisco.

BUILDINGS.

CARTHAGE, N. Y.—Reports state that the business portion of this village was destroyed by fire Jan. 1, causing a loss of about $100,000.

NEW YORK, N. Y.—Plans have been filed by John K. McAfee, 335 West 84th St., for two 7-story brick flat buildings on Central Park West, near 93d St., to cost $150,000. G. F. Pelham, Arch., 503 5th Ave.; by Adolf Wiedhopf, 2068 1st Ave., for two 5-story brick flat and store buildings on 75th St., near 1st Ave., to cost $56,000. Edward Wenz,Arch., 1491 3d Ave.; by Jacob Fischel, 197 Henry St., for alterations to a 6-story brick flat and store building at 127 to 131 Broome St., to cost $50,000. Horenburger & Straub, Archs.; by L. & J. Brandt, owners and architects, 8th Ave. and 116th St., for a 6-story brick flat building on 113th St., near the Boulevard, to cost $55,000; by Edward Kemp, 722 5th Ave., for a 9-story brick and stone office building, at 70 and 72 Broad St., to cost $80,000. R. W. Gibson, Arch., 54 Broad St.; by B. Hamburger, 237 East Broadway, for two 6-story brick flat and store buildings, at Stanton and Goerck Sts., to cost $60,000. Horenburger & Straub, 122 Bowery; by Henry Miller, 701 East 138th St., for two 5-story brick flat buildings on 136th St., near Willis Ave., to cost $40,000. H. T. Howell, 748 East 138th St.——W. G. Triest, Contracting Engr., 39 Cortlandt St., New York, has been awarded the contract for two new storehouses at the navy yard at $134,000, on modified plans for the two buildings. The bids for the storehouse for equipment materials were opened Dec. 9 and for the one for ordnance materials, on Dec 23.

SANDY HILL, N. Y.—It is reported that J. J. Cunningham proposes to erect a new 3-story brick building, 81×130 ft., on the site of the present Coffee House.

ROCHESTER, N. Y.—Bids are asked by the board of education, Free Academy Bldg., until Jan. 6, for the erection of a new school building to replace School No. 12, on Howell St. Francis S. Macomber, Chn. Bldg. Com.; J. Foster Warner, Arch., Granite Bldg.

WHITEHALL, N. Y.—Andrew Douglas, Rome, N. Y., is stated to have received the contract for erecting the new state armory building at Whitehall, to cost about $40,000. Work is to commence about April 1.

EASTON, PA.—This city will soon vote upon the question of erecting a new municipal building and a market house.

PHILADELPHIA, PA.—Stearns & Castor, Stephen Girard Bldg., have completed plans, according to reports, for the new building to be erected for the German Protestant Home for the Aged, at Lawn Dale, to cost about $30,000.——Reports state that the Remington & Sherman Co., 624 Richmond St., has been awarded a contract for a storage vault for silver bullion in the Philadelphia Mint building at $102,038, and for six compartment vaults and four working vaults, at $193,673; time, Oct. 1.

PHILADELPHIA, PA.—Preliminary plans are being prepared, according to reports, for a 9-story apartment building at 10th and Clinton Sts., to cost about $200,000; also for a 10-story apartment building at 17th and Arch Sts., to cost $250,000. E. P. Brink & Son, Archs., Stephen Girard Bldg.

PITTSBURG, PA.—The erection of a new building for the Charity Hospital, Collins Ave. and Hoeveler St., is contemplated; estimated cost, $50,000.

PITTSBURG, PA.—The Third United Presbyterian Church on Diamond St. was destroyed by fire Dec. 31. It will probably be rebuilt at once. Percy F. Smith, Pres. Board of Trustees.——Director Booth, of the Department of Charities, asks for an appropriation of $122,500 for additions and new boiler house at City Insane Hospital.——Mrs. Frank Sellers will build an apartment house at 5th and Shady Aves., to cost $30,000

SEWICKLEY, PA.—Anderson & Cook, Beaver, Pa., have been awarded the contract for the erection of a $60,000 summer residence near Sewickley, for B. F. Jones, of Pittsburg, according to reports. Work is to commence at once.

VILLANOVA, PA.—Plans have been completed for a 3-story monastery building, 400 × 160 ft., for Villanova College; reported cost, $200,000. Edwin F. Durang, 1,200 Chestnut St., Philadelphia, Pa.

WILMINGTON, DEL.—Plans have been prepared for a 3-story brick building to be erected for Leonard Heiss, at 715 Market St. E. L. Rice, Arch.

NEWPORT NEWS, VA.—It is reported that Howard W. Sibby, of Washington, D. C., intends to erect a 6-story office building on Washington Ave. in this city, to cost about $25,000.

CHARLESTON, S. C.—The following bids were received Dec. 13 for the erection of an auditorium building in this city; Samuel Lapham, Chn. of Com.: Robt. McCarrel, Charleston, $32,250, extras, $2,200; Nicholas Ittner, Atlanta, Ga., $32,427, extras, $1,920; E. N. Jenkins, Charleston, $33,025, extras, $2,440; J. T. Snelson, Charleston, $33,237, extras, $2,620. Reports state that the contract has been awarded to Robt. McCarrel.

MILLEDGEVILLE, GA.—Reports state that the prison commission expects to ask for bids in January for the erection of a new prison at Milledgeville, to provide for 300 prisoners.

FLORIDA REEFS, FLA.—Bids are asked until Jan. 30 for erecting six day beacons, as stated in our advertising columns. Lieut.-Col. A. N. Damrell, U. S. Engrs, Mobile, Ala.

MEMPHIS, TENN.—The Memphis Terminal Co., said to be an offspring of the Louisville & Nashville R. R. Co., has secured a charter in Memphis with the aim of building a station in that city. The capital stock of the company is placed at $50,000. The incorporators are: Milton H. Smith, Pres. of Louisville & Nashville; H. W. Bruce; Cushman Quarries; S. H. Edgar, Asst. Mgr., and John P. Houston, Counsel, at Memphis.

LEXINGTON, KY.—Bids are asked by the trustees of the Kentucky House of Reform, at 11 Cheapside, Lexington, until Jan. 17, for the erection of a brick boiler house and manual training building on the state farm. Mrs. L. E. Yandell, Pres.; Richards & McCarty, Archs., Ruggery Bldg., Columbus, O.

ALLIANCE, O.—A fire in this city, Dec. 27, damaged the Atwell Block, causing a reported loss of $100,000.

NEW PHILADELPHIA, O.—An item from this town states that bids will be received by the clerk of York township, Tuscarawas county, until Jan. 21, for the building of a school house in sub-district No. 1. Chas. F. Limbach, Township Clk.

OBERLIN, O.—A number of business houses in Oberlin were destroyed by fire, Dec. 29; reported loss, $50,000.

EVANSVILLE, IND.—Bids are asked, Jan. 20, for rebuilding the St. George Hotel, for Fred. Van Ormen; estimated cost, $65,000. Harris & Shopbell, Archs.

FRANKTON, IND.—It is reported that W. H. H. Quick, John Sharp and Alexander Wise will erect a new 3-story business block on the site of the old Commercial Bldg., to cost about $60,000.

INDIANAPOLIS, IND.—The First Baptist Church has decided to erect a new church building, to cost about $60,000.

CHICAGO, ILL.—The Melrose apartment building on the south side of the city was damaged by fire, Dec. 21, causing a reported loss of $80,000.——Swift & Co. will build a new 5-story warehouse, 128 × 240 ft. at its stock yards, to cost about $60,000.——Plans have been prepared, according to reports, for a 4-story apartment building to be erected on Drexel Boulevard and 43d St., to cost about $150,000. Frank V. Newell, Arch., 1002-226 La Salle St.

JOLIET, ILL.—A fire in this city, Dec. 27, damaged the business block owned by St. John's Universalist Church Association; reported loss, $53,000.

MILWAUKEE, WIS.—Report state that the Rice & Friedman block, which was recently destroyed by fire, will be replaced by a new $50,000 building.

OSHKOSH, WIS.—Plans have been adopted for the proposed new library building to be erected here, at a cost of about $50,000. W. W. Waters, Arch., Oshkosh.

DES MOINES, IA.—The building occupied by the M. Rigelman Co., wholesale milliners, was destroyed by fire Dec. 25; reported loss, $60,000.——Contracts will be let before Feb. 1, according to reports, for a 5-story department store building, 83 × 133 ft., to be erected for the Frankel Improvement Co., to cost about $55,000.

GARNER, IA.—The Gross Construction Co., of La Crosse, Wis., has been awarded the contract for the construction of a brick and stone court house at Garner, at

$24,990. F. W. Kinney, Arch., Austin, Minn. This company was also the lowest bidder for erecting the new court house at Austin, Minn., at $24,990. The contract for the latter work will not be let until Feb. 1.

MARSHALL, MINN.—The board of education is planning to replace the $15,000 high school building destroyed by fire on Dec. 8 by a new building to cost about $30,000. Orff & Guilbert, Archs., Minneapolis, Minn.

MINNEAPOLIS, MINN.—A fire here Dec. 27 destroyed elevator "I," causing a reported loss of $100,000; fully insured.

OWATONNA, MINN.—Bids are asked by the board of directors until Feb. 1, extension of time, for the erection of the proposed public library building. B. E. Darby, Secy.

CANTON, S. DAK.—At the recent election held in Lincoln county bonds were voted for the erection of a new court house in this city, to cost $25,000. Bids for the erection of the building will be asked for by County Auditor Bennett.

ST. LOUIS, MO.—Reports state that the Republic Building Co. has agreed to erect a new building at 7th and Olive Sts., to cost not less than $117,500.

ARKADELPHIA, ARK.—Bids are asked until March 1, according to reports, for erecting a court house for Clark county, to cost about $40,000. J. H. Crawford, Chn.; Chas. L. Thompson, Arch., Little Rock, Ark.

SAN FRANCISCO, CAL.—It is announced that Col. Marshall, Ch. Q.-M. of Dept. of the Pacific, has received authority to expend $113,340 on the new pavilion hospital to be erected at the Presidio. The work will require about six months.——The following bids were received by the supervising architect, Washington, D. C., Dec. 29, for new boiler plant, pumps, and certain modifications to the power plant and heating apparatus, etc., of the Appraisers' warehouse building, San Francisco; local bidders:

T. J. Moynihan	$13,700	5 mos.
Fulton Engineering & Shipbuilding Co.	9,500	120 days
George H. Tay Co.	8,750	100 "
Patrick F. Dundon	9,737	4 mos.
Risdon Iron & Locomotive Works	20,750	90 days

SAN FRANCISCO, CAL.—The following bids have been received for erecting the new police station on 17th St.: J. H. McKay, $64,000; Hannah Bros., $69,000. The appropriation was $50,000.

KINGSTON, ONT.—The St. George's Cathedral was destroyed by fire, Jan. 1, causing a reported loss of $50,000.

WATER-WORKS.

BOSTON, MASS.—The following bids were received Dec. 29, by the Metropolitan water board, for building a high-service stone pumping station at Spot Pond, Stoneham: Norcross Bros., $123,925; McNeil Bros., $108,480; L. P. Soule & Son, $117,730; C. A. Dodge & Co., $119,511; Connery & Wentworth, $124,344; Woodbury & Leighton, $110,823; Willcutt & Son, $124,653; C. Everett Clark & Co., $134,005; Whidden & Co., $133,960; Fessenden & Libby, $233,280. The contract was not awarded.

MALDEN, MASS.—Press reports state that the water department will purchase about 15,000 ft. of 6 to 12-in. pipe, 15 hydrants and 30 gates early this year. J. W. Jordan, Supt.

PAWTUCKET, R. I.—The common council has passed a resolution, according to report, appropriating $12,000 for water-works extensions and improvements.

RIDGEFIELD, CONN.—The Sanitary Construction Co., Hartford, has been given the contract to construct the works to be built in this village by the Ridgefield Water Co. Artesian wells will be sunk.

BINGHAMTON, N. Y.—It is reported that about 18,000 ft. of extension will be made at an early date. D. Felter, Supt.

BUFFALO, N. Y.—The Western Water Co. has been incorporated with $5,000 capital. The incorporators are: J. Adsit, A. T. Mohr, F. P. Van Deubery and W. J. Stanton, all of Buffalo.

LOCKPORT, N. Y.—The water commissioners have recommended the purchase of an 8,000,000-gallon pump to replace the 3,000,000-gallon pump now in use.

MASSENA, N. Y.—The Massena Artesian Well Association has been organized to build works in this place. M. H. Flaherty, Pres.; H. B. Chase, Secy.; H. B. Russell, Treas.

BRANCHVILLE, N. J.—Lewis Van Duyne, Engr., Boonton, N. J., has completed surveys for a water supply for this village.

JERSEY CITY, N. J.—It is reported that the mayor will not sign the water contract at once, recently awarded to P. H. Flynn.

BOALSBURG, PA.—Malone Bros., Hollidaysburg, have been given the contract to construct the water system, according to report.

DERRY CHURCH, PA.—The Derry Water Co. has been incorporated, with $10,000 capital, with $1,000 paid in, for the purpose of building works in this place. Israel Moyer, M. R. Henry, Michael Guigot, J. H. Moyer, Derry Church, and John E. Fox, Harrisburg, Pa., are the incorporators.

GALETON, PA.—The Galeton Water Co. has been incorporated, with $40,000 capital stock, with $4,000 paid in, to build works in this borough. The incorporators are: J. R. Collins, Treas.; M. E. Northam, Frank Greco, G. A. Caldwell and W. H. Sullivan, all of Austin, Pa.

GLEN CAMPBELL, PA.—It is reported that a company has been organized in this place, with $15,000 capital, to build works. Jos. O. Clark, Treas.

PARSONS, PA.—It is reported that the city is considering the advisability of buying the works in this place for $185,000.

PHILADELPHIA, PA.—The water committee of the councils has been asked for $80,000, in addition to the $100,000 recently requested, to construct an annex to the boiler house, additional boilers, two 5,000,000-gallon pumping engines and a new 36-in. main from the pumping station to the reservoir, all at the Roxborough pumping station. Thos. M. Thompson, Dir. Pub. Wks.

PITTSBURG, PA.—Bids are asked until Jan. 6 for laying a 48-in. riveted steel force main to the reservoir in Highland Park. Edw. M. Bigelow, Dir. Pub. Wks.

WILLIAMSPORT, MD.—John D. Adelsberger, Engr., Baltimore, is preparing plans for a new pumping station near the junction of Conococheague Creek and the Potomac River, according to report.

MARTINSBURG, W. VA.—Bids will be asked for a 2,500,000-gallon pumping engine, according to report. J. M. Shaffer, Supt.

ORANGEBURG, S. C.—Bids are asked by the commissioners of public works until Jan. 25 for furnishing water-works and electric lighting material, as stated in our advertising columns. Frederic Minshall, Engr.

CHATTANOOGA, TENN.—J. J. Brown writes us that nothing has been done in regard to projected improvements.

HIGHLANDS, KY.—The Highlands Water Co. has been incorporated with $50,000 capital to furnish both water and light. The incorporators are: Louis Pfeiffer, L. K. Marty, Jas. Southgate and C. F. Stricker, all of Newport.

BARNESVILLE, O.—Jas. Kinney, Bellaire, and S. C. Byer, Lancaster, Pa., are reported to have submitted a proposition to the council offering to construct a system of works, the town to pay for hydrant rental.

BEREA, O.—Bids are asked until Feb. 6 for the purchase of $30,000 of water-works bonds. T. J. Quayle, Mayor; E. S. Loomis, Village Clk.

CANTON, O.—Bids are asked until Jan. 23 for the purchase of $15,000 of water-works bonds. A. H. Eckhardt, M. J. Hogan and A. R. Turnbull, Com.; Louis N. Ley, Cy. Clk.

CLEVELAND, O.—Bids are asked until Jan. 12 for constructing delinquent house water connections on eleven streets. Bids are asked until Jan. 27 for furnishing four new water cylinders and otherwise repairing and rebuilding Worthington pumping engine No. 4 in the Division St. pumping station; check, $1,000. Geo. R. Warden, Dir. Pub. Wks.

MARION, O.—The council has appointed a committee to investigate the question of purchasing the plant of the Marion Water Co., whose franchise has expired. D. R. Crissinger, F. R. Salter, Jas. G. Fairbanks, W. G. Harding, O. Wollenweber, Wm. Hoberman and J. Maag, Com.

McCONNELLSVILLE, O.—Bids are asked until Jan. 25 for the purchase of $20,000 of bonds. L. J. Weber, Mayor.

BRAZIL, IND.—Jos. W. Williams, Cy. Clk., writes us that the city has taken no action on the question of building works, but that the matter is under discussion.

GOSHEN, IND.—Bids are asked until Jan. 13 for 15,000 ft. of water mains, according to report. J. D. Wolfe, Cy. Clk.

MONTPELIER, IND.—It is reported that the water-works in this place have been sold by J. A. Newbauer, Recvr., to Jos. Shoemaker for the Farmers' Deposit Bank.

SOUTH BEND, IND.—Bids are asked until Jan. 11 for two 150-HP. water tube boilers. Address the board of water-works trustees.

WASHINGTON, IND.—The City Water Co. has been incorporated with $30,000 capital. The incorporators are: C. E. Gray, W. G. Maxey, Thos. J. Axel, Chas. G. Gardner and Theo. W. Gray.

BAY CITY, MICH.—A committee has been appointed by the mayor to take steps towards securing a pure water supply in connection with West Bay City. N. B. Bradley, Benj. Boutell and G. H. Shearer are said to be interested.

CHEBOYGAN, MICH.—Bids are asked until Jan. 21 for sinking an artesian well.

DETROIT, MICH.—The water commissioners have decided to lay mains through Superior St., about 440 ft. in length. E. W. Pendleton, Pres.; H. S. Starkey, Secy.

GRAND HAVEN, MICH.—Geo. R. Wyman, Chn. Water-Wks. Com., writes us that the question of issuing bonds for new boilers has not as yet been formally acted upon by the council.

HARTFORD, MICH.—At the special election held here Dec. 27 it was decided by a vote of 233 to 41 to bond the town for works to cost $12,000.

SAULT STE MARIE, MICH.—It is reported that the city is preparing to purchase a 5,000,000-gallon pump. H. C. Thompson, Supt.

GALESBURG, ILL.—E. F. Chapin, Cy. Engr., is engaged at present in making surveys for a future water supply for this place. It is thought that a dam will be built about nine miles from town. Dr. W. O. Bradley, Chn. of Com.

CANBY, MINN.—Bids are asked until Jan. 24 for furnishing the material and laying a system of water mains, consisting of about 1,369 ft. of 8-in. pipe, 6,738 ft. of 6-in. pipe, 252 ft. 4 ins. of hydrant branches, 18 hydrants, 5 valves and 7,400 lbs. of specials; also for furnishing and erecting a 60,000-gallon pipe tank on an 80-ft. steel tower with stone foundation. C. Anderson, Pres. Village Council; Oscar C. Olsen, Village Recorder.

MINNEAPOLIS, MINN.—The water department will purchase, according to report, about 25,176 ft. of 6 to 16-in. pipe. J. H. McConnell, Supt.

ST. PAUL, MINN.—The board of water commissioners received bids Dec. 21 for supplying wrought iron pipe and tools, amounting to about $2,500, from the following: Western Supply Co., Robinson, Cary & Co., Crane-Ordway Co., Farwell, Ozmun, Kirk & Co. and H. P. Rugg. The contract will be awarded later.

CORPUS CHRISTI, TEX.—J. S. Henderson, Secy., writes us that the Corpus Christi Water Supply Co. has accepted the work of H. R. Sutherland, contractor, for the dam across the Nueces River, the source of supply. A peculiar feature of the dam is that it is built to keep the water out instead of in, as at times high tides and strong winds back the salt water up the stream for miles, thus contaminating the supply.

CORSICANA, TEX.—J. S. Thatcher, Engrs., Dallas, Tex., writes us that he is about to begin topographical surveys for new reservoirs, etc.

WACO, TEX.—J. P. Sample, Secy., Bell Water Co., writes us that no decision has yet been arrived at as to whether the company will rebuild or not.

SHAWNEE, OKLA.—The following bids were received for building the water-works system: Ruemmeli & Siebert Refrigerating Machine Co., St. Louis, Mo. (accepted), using a Worthington pumping engine, $34,528; Kelley & Steel, $33,847; G. Jaeger, $33,385.

NEW WHATCOM, WASH.—The city council at a meeting Dec. 19 rejected all bids for building works, according to report. J. E. Ryus, Councilman, may be addressed.

SPOKANE, WASH.—The board of public works has ordered the laying of a main on Sinto Ave., at a cost of $2,600; also for replacing a 6-in. main, at an estimated cost of $1,440.

MEDFORD, ORE.—It is reported that the council has ordered the advertising for bids for furnishing water pipe and fittings.

COLTON, CAL.—The proposition to issue $20,000 bonds for a water system was carried by an unanimous vote, according to report.

KESWICK, CAL.—E. Markwick, Engr., Redding, Cal., is engaged in making plans for this place, according to report.

LAKEPORT, CAL.—H. F. Keeling, Town Clk., writes us that the election held Dec. 20, to vote on the proposition to issue $15,400 bonds for works, resulted, by a vote of 131 to 11, in favor of the proposition. No steps had been taken towards securing supplies.

SACRAMENTO, CAL.—The water committee has recommended a special election to vote on the issuing of $10,000 bonds for making tests and procuring from 30 to 100 acres of land on which to build works later. L. L. Lewis, Dir. Pub. Wks.

PASADENA, CAL.—Bids are asked until Jan. 10 for the deeper excavation, walling and completion of the city well; check, $200. Heman Dyer, Cy. Clk.

PLEASANTON, CAL.—J. H. Neal, Town Clk., writes us that a resolution has been passed by the board of trustees to purchase a site for works, on which an artesian well will be sunk, from which it is hoped to obtain a supply of 42,000 gallons daily. Geo. L. Nusbaumer, Oakland, County Surv.

SANTA BARBARA, CAL.—Michael Struppell, contractor, submitted the only bid for extending the city water tunnel. He offered to do the work at $10.50 a face foot and to extend the tunnel 500 ft. The bid will be acted upon at the first meeting in January, according to reports.

WHITTIER, CAL.—Bids are asked until Jan. 16 for $40,000 bonds. Walter E. Butler, Cy. Clk.

FLAGSTAFF, ARIZ.—The proposition to vote $10,000 additional water-works bonds carried at a recent election.

PHOENIX, ARIZ.—Ernest A. Hagen, Engr., 338 Byrne Bldg., Los Angeles, Cal., writes us that the preliminary plans have been made and the bond election will be held Jan. 24, instead of Jan. 12. The system will consist of about 14 miles of cast-iron pipe of from 6 to 20 ins. diam., and the water will be pumped from wells by compound condensing pumps to a water tank, 35 × 50 ft., 100 ft. above ground on a steel tower; 300-HP. boilers will be used. Aaron Coldberg, Chn.; R. E. Doggs, Secy.

BRACEBRIDGE, ONT.—A by-law to borrow $5,000 to extend the water-works system is reported to have been passed by the council.

STAYNER, ONT.—A. M. McFaul, Mayor, writes us that the proposed system to be built in this town will consist of springs, 2½ miles distant, flowing by gravity to a reservoir 170 ft. above the town. About 26,000 lin. ft. of 4 to 12-in. pipe, 25 hydrants and 12 valves will be required; estimated cost, $24,000. John Galt, Engr., Toronto, Ont.

MOOSE JAW, N. W. T.—It is reported that works are contemplated in this town.

CASCADE CITY, B. C.—It is reported that William Anderson, Res. Engr., is purchasing supplies for the construction of the works which will be built in this city by the Dominion Mining & Development Agency Co. H. Allers Hankey, Secy.

VANCOUVER, B. C.—Contracts for material for the water-works extension have been awarded to Evans, Coleman & Evans, for pipe; to Ross & Howard, for pipe, and Armstrong & Morrison Foundry Co., for rivets, all of this city.

IRRIGATION.

WASHINGTON, D. C.—Reports state that Senator Warren, Chn. Com. on Irrigation and Reclamation of Arid Lands, has reported favorably to the senate a bill to grant 5,000,000 acres of land to each of the arid land states, to be rented or sold by the states, for development.

DES MOINES, IA.—Reports state that Wm. Miller and W. H. Harwood have incorporated an irrigation company and propose to construct a plant in Texas to cultivate about 10,000 acres this year.

COTTONWOOD, CAL.—E. B. McClaskey has engaged Engineer Freeland, Redding, Cal., to make a survey for a ditch from Cottonwood Creek to Cottonwood.

NEW COMPANIES.—Emerson Tract Irrigation Co., Mountain View, Cal.; $10,000, with $2,550 paid in; to establish a pumping plant and irrigation system on the Emerson tract, near Mountain View; to procure and own property, and to sell, dispense and distribute water for irrigation and domestic purposes. W. B. Atkins, Secy.; W. H. Bates, Pres.; E. L. Emerson, Barney Job, H. H. Higgins, F. M. Pritchet, Treas., of Mountain View, and G. L. Culver, of San Jose.

Garner Ditch Co., Kingsbury, Cal.; $1,000, with $240 paid in; O. Paddock, W. T. Martin, O. Donell, A. Davidson, L. Olsen, Kingsbury.

SEWERAGE.

ST. ALBANS, VT.—B. D. Hopkins, Cy. Clk., writes us that no improvements are projected at this time and probably no bids will be received for work in the future.

ANDOVER, MASS.—Abraham Marlowe, Town Clk., writes us that nothing is contemplated at present in the way of extensions or improvements.

EVERETT, MASS.—The mayor has recommended that $100,000 be borrowed for sewer extension and that the legislature be petitioned for authority to do so. Francis W. Dana, Jr., Cy. Clk.

HOLYOKE, MASS.—O. C. Terry, Clk. Bd. Pub. Wks., writes us that there is nothing projected in that city at present.

LEXINGTON, MASS.—Leonard A. Saville, Town Clerk, writes us that the proposition to issue $100,000 bonds for the construction of sewers has been twice defeated by a two-thirds vote in town meeting, but it is possible that the question will be again submitted at the annual meeting, in March. The town has recently joined the Metropolitan Sewerage System.

LYNN, MASS.—Thos. Hurley was awarded the contract, Dec. 31, to build the Lovers' Leap Ave. sewer, at $1,344. E. D. Pevear received the contract to build the Boston St. sewer, at $573, according to report.

SALEM, MASS.—J. C. Entwistle, Cy. Clk., writes us that nothing is projected at present.

SPRINGFIELD, MASS.—Fred. T. Ley & Co., Springfield, were awarded the contract, Dec. 23, for completing the construction of 1,000 ft. of brick sewer in Fulton, Sargeant and Carew Sts., at $8,538. The other bids were: R. D. Maynard, $8,843; M. Russo & Co., Boston, $9,595; Maloney & Peterson, $9,966; Geo. N. Vaughn, $10,637; C. E. Trumbull & Co., Boston, $10,793; Coleman Bros., Boston, $11,734; D. W. Mellen, $12,500; G. M. Atkins & Co., $13,244. F. A. Rivers & Co., Holyoke, offer to complete the construction of the submerged outlet to the sewer in the Connecticut River for $1,100, the city to furnish the cypress trunk to be laid on the bed of the river. W. L. Dickinson, Supt. of Sts.; C. M. Slocum, Cy. Engr.

STOCKBRIDGE, MASS.—It is reported that the Waring system of sewage disposal has been adopted by the sewer committee and plans will be prepared at once.

WAKEFIELD, MASS.—Chas. F. Hartshorne, Town Clk., writes us that the matter of building a sewerage system for this town is in the hands of a committee which is investigating and will report at a town meeting to be held, probably, early in March. L. E. Hawes, Engr.

ALBANY, N. Y.—The common council has ordered the construction of a 15-in. vitrified stoneware pipe sewer in Trinity Place. John A. Delehanty, Corporation Counsel.

BUFFALO, N. Y.—Bids are asked until Jan. 11, for the construction of brick sewers in Hopkins Ave. and in South Park Ave. R. G. Parsons, Secy. Bd. Pub. Wks.

CANAJOHARIE, N. Y.—The question of constructing a sewerage system is being agitated.

LITTLE FALLS, N. Y.—The board of public works has approved the plans for a complete system of sewers for the streets on the south side of the river; estimated cost, $15,796.

MOUNT VERNON, N. Y.—Bids are asked until Jan. 17 for the construction of receiving basins and pipe connection on five streets; also for constructing a pipe drain and two receiving basins on East Sidney Ave., and for constructing a lateral sewer in Pearl St. Edw. W. Fiske, Mayor; Wm. N. Hoyt, Cy. Clk.

NEWARK, N. J.—The question of constructing a sewer in the upper part of the city, passing through Branch Brook Park, is under consideration by the city authorities. ——E. L. Price, Cy. Counsel, has drafted a bill which will be presented to the next legislature to enable the construction of an outlet sewer to tidewater in Staten Island Sound, for the purpose of disposing of the sewerage of this city and Clinton township, Irvington, Vailsburg, South Orange, West Orange and Millburn.

NEW ORLEANS, LA.—The council has passed an ordinance providing for a special election, Feb. 2, to vote a tax of 2½ mills for the construction of a system. Walter C. Flower, Mayor.

CLEVELAND, O.—Bids are asked until Jan. 6 for cleaning the catch-basins, traps, inlets, etc., of the surface water system for the year 1899; check, $300; also until Jan. 12 for constructing delinquent house connections on eleven streets; check, $100. Geo. R. Warden, Dir. Pub. Wks.

DAYTON, O.—Plans and specifications have been prepared for the construction of lateral sewers on Simpson St. J. L. Baker, Pres. Bd. of Cy. Affairs; J. E. Gimperling, Cy. Comptroller.

LORAIN, O.—It is reported that an extended system of sewers will be built in the section of the city adjoining the plant of the Lorain Steel Co.

NILES, O.—The city engineer has been instructed to extend the plans of the sewer system to the city limits, according to report.

BOSWELL, IND.—Press reports state that a system of sewers has been planned by Surveyor Blasdel.

ALBION, MICH.—It is reported that the question of building sewers is being agitated. H. M. Dearing, Pres. Bd. Pub. Wks.

BUSHNELL, ILL.—W. H. Dawson, Cy. Clk., writes us that the election held Dec. 19 resulted in a vote of 183 to 181 in favor of issuing sewer bonds. No action had been taken by the council.

CHICAGO, ILL.—Bids are asked until Jan. 11 for laying 6-in. drains on nine streets. L. E. M'Gann, Pres. Bd. of Pub. Wks.

MATTOON, ILL.—The sewerage committee of the city council has recommended the building of a sanitary sewer system in the southeast section of the city. A. C. Loomis, Cy. Engr.

WAUKEGAN, ILL.—The city engineer is preparing plans for a sewer on the south side and in the Grand Ave. district, according to reports.

MILWAUKEE, WIS.—The commissioners of public works estimate that $235,100 will be needed for sewerage purposes this year.

NEWTON, KAN.—The Newton Improvement Co. will, it is reported, begin an extension to its sewer system on the north side of the city in a few days.

ST. LOUIS, MO.—Bids are asked until Jan. 13 for the construction of 240 ft. of 18-in., 350 ft. of 15-in. and 500 ft. of 12-in. vitrified clay pipe sewers. Robt. E. McMath, Pres. Bd. Pub. Impvts.

HOUSTON, TEX.—Fitzgerald & Cahill were the lowest bidders on the construction of the Tuam and Bell Sts. and Hutchins St. sewers, according to report.

DENVER, COLO.—The Mayor has signed the Capitol Hill storm sewer bill, noted in our last two issues.

DENVER, COLO.—Bids are asked until Jan. 16 for constructing a sewer in Capitol Hill district No. 1; check, $10,000.

SEATTLE, WASH.—The council has passed an ordinance providing for the construction of sewers in four streets. W. V. Rinehart, Pres.; T. J. Humer, Mayor.

SPOKANE, WASH.—The council has passed an ordinance providing for the construction of an 8-in. vitrified pipe sewer on Pacific Ave., acocrding to reports. J. M. Comstock, Pres.; L. F. Boyd, Clk.

LOS ANGELES, CAL.—W. A. Frick has been awarded the contract to build an 8-in. sewer in Fourth St.; also to build a sewer in Mateo St. C. H. Hance, Cy. Clk.

OAKLAND, CAL.—John Geary is reported to have been given the contract, Dec. 23, to construct a sewer in Castro St., at $1,335. J. W. Tompkins, Cy. Clk.

RIVERSIDE, CAL.—The trustees have ordered the construction of a sewer in Monroe St. C. R. Stebbins, Cy. Clk.

SACRAMENTO, CAL.—It is reported that the city will soon vote on the issue of bonds for a new sewer system.

SANTA CRUZ, CAL.—The trustees have ordered the construction of 1,385 ft. of vitrified pipe sewers in York St. J. E. Greenfield, St. Comr.; C. F. Mudridge, Cy. Clk.

SANTA MONICA, CAL.—J. T. Kiggins is reported to have received the contract for constructing a sewer in South Ocean Ave.

WATSONVILLE, CAL.—The city clerk has been instructed to invite engineers to visit this city and to submit estimates on the probable cost of a sewer system, according to report.

GARBAGE DISPOSAL—STREET CLEANING

ATLANTIC CITY, N. J.—The sanitary committee has decided to reject all the bids for removing the city garbage, which were published in our last issue.

CAMDEN, N. J.—The following bids have been received for repairing the garbage crematory: B. F. Sweeten & Son, repairing crematory, $974, for relining stack, $9.74 a foot; Burroughs & Madara, for repairing crematory, $1,733, for relining stack, $5.50 a foot; Burt & O'Hara (accepted), for repairing crematory, $990, for relining stack, $6.85 a foot.

PHILADELPHIA, PA.—The contract for the collection of garbage during the year 1899 was awarded to the American Garbage Co. Dec. 31, at $358,000. Thos. M. Thompson, Dir. of Pub. Wks.

CHICAGO, ILL.—Bids are asked until Jan. 24, according to reports, for the collection and disposition of the city garbage for a period ending Dec. 31, 1899. L. E. McGann, Comr. Pub. Wks.

OAKLAND, CAL.—Press reports state that the ordinance and judiciary committee has decided to recommend to the city council that the request made some time ago for a franchise to conduct a garbage crematory on the Alameda side of the estuary be denied. Some of the members believe that eventually the city would conduct a crematory of its own, and the granting of a franchise to private parties would prove a sad blow to the Italian scavengers who are just now handling the city's garbage in a satisfactory manner.

SAN FRANCISCO, CAL.—Bids are asked until Jan. 18 for the construction of a garbage crematory at the Presidio, San Francisco. Address J. M. Marshall, Ch. Q. M., San Francisco.

LONDON, ENGLAND.—Competitive designs are asked by the London county council, until Feb. 28 for a dust cart for use in connection with the collection and disposal of house refuse; premium to successful competitor, £25 ($125). C. J. Stewart, Clk. of Council, Spring Gardens, S. W.

STREETS AND ROADS

BEVERLY, MASS.—Mayor Benjamin D. Webber recommends the course of the proposed state highway in North Beverly to be from Essex bridge to the present state highway. He has also proposed the construction of a trunk sewer around the shore from River St. to Essex bridge.

BRIGHTON, N. Y.—Bids are asked until Jan. 9 for improving the East Ave. Road, in the towns of Brighton and Pittsford. Chas. A. Bastable, Clk. Bd. Supervisors, Rochester, N. Y.; Campbell W. Adams, State Engr., Albany.

SEACLIFF (L. I.), N. Y.—The council voted Dec. 21 to issue $8,000 in bonds for paving, according to reports.

SYRACUSE, N. Y.—The board of aldermen have awarded a contract to the Empire Contracting Co., at $19,884, for paving on Townsend St. with Alcatraz asphalt.

UTICA, N. Y.—The council proposes to expend about $150,000 for paving this year.

WHITE PLAINS, N. Y.—Reports state that certain citizens of this village and the board of trustees are trying to introduce a general system of street improvement. It is estimated that the work would cost between $150,000 and $200,000. A public meeting will probably soon be called to consider the matter.

ATLANTIC CITY, N. J.—Bids are asked by the council until Jan. 16 for constructing 21,340 sq. yds. of macadam, 5,025 sq. yds. of brick paving on concrete, excavating, etc., 137 cu. yds. of concrete, 13,840 lin. ft. of straight curbing and 512 lin. ft. of curved curbing, as stated in our advertising columns. J. W. Hackney, Cy. Surveyor.——The Delaware River Quarry & Construction Co. has submitted the lowest bid, at $35,936, for the macadamizing, etc. of Cross Ave.

ELIZABETH, N. J.—A petition will probobly soon be presented to the council for the paving of Livingston St. with asphalt, according to reports.

JERSEY CITY, N.J.—The street and water board awarded a contract Dec. 27 to Philip Tumulty, Jr., for improving Claremont Ave., between the Boulevard and West Side Ave.

PLAINFIELD, N. J.—The council recommends brick and asphalt for future paving. A number of the business streets will probably be paved in the spring.

PATERSON, N. J.—At a meeting of the board of aldermen Dec. 27, Mayor Hinchliffe and the street committee decided that portions of Ellison, Washington, Van Houten, Paterson, Broadway, Market and Marshall Sts., should be paved with brick or asphalt this year. The council was instructed to prepare an ordinance designating these streets which will be presented to the board with the recommendation of the committee. Wm. Ferguson, Cy. Engr.

PITTSTON, PA.—At the election Feb. 21, a proposition to issue $22,000 in bonds for paving will be voted upon, according to reports.

UPLAND, PA.—It is reported that Geo. K. Crozer, Upland, has offered to give $1,000 for street improvements in this borough, provided that $4,000 additional is appropriated.

RALEIGH, N. C.—Reports state that an application will be submitted to the next general assembly to authorize the issue of $100,000 in bonds for streets and other improvements.

JACKSONVILLE, FLA.—The board of public works awarded a contract Dec. 23, to W. M. Lasley, Chattanooga, Tenn., at $31,504, for paving Main St. with brick, from Eighth St. to the bridge.

NATCHEZ, MISS.—Wm. James, Alderman Second Ward, writes us that arrangements are being made to pave the streets of Natchez with brick, provided that the contractor will give a bond for a sufficient length of time to complete the work. On Jan. 5 the contract and specifications will be proposed and it may be two or three months before the work is let.

CLARKSVILLE, TENN.—The Clarksville & Russellville Turnpike Co. has been incorporated at this place, to construct a turnpike; capital, $10,000; by C. P. Warfield, John D. Moon, T. N. Walthal, Martin Elder and H. C. Merritt.

LOUISVILLE, KY.—The board of public works was to have opened bids Dec. 29, for $100,000 worth of asphalt paving, but, owing to a mistake in the advertisement, the bids were returned unopened. New bids will be asked in about two weeks.

BEARDSTOWN, ILL.—This place proposes to construct two or three miles of brick paving this year.

DAVENPORT, IA.—Thomas Murray, Cy. Engr., informs us that no definite action has been taken by the city in regard to the proposed paving, sewers, etc.

JOPLIN, MO.—E. Z. Wallower informs us that the council has postponed action on the proposed paving of Main St., for the present.

TOPEKA, KAN.—The committee reported favorably on a petition Dec. 26, to pave Huntoon St., from Topeka Ave. to Fillmore, south on Fillmore to 13th St. and west on 13th St. to Clay St.

BRYAN, TEX.—The council passed an ordinance Dec. 16 to authorize the issue of $15,000 of 5% street paving bonds.

SEATTLE, WASH.—The council has agreed with the proposition of the committee from Ballard to take action for the construction of a road from Kilbourne Ave. to connect with A St. in Ballard.——Reports state that a number of mining men in the Ruby and Slate Creek districts are agitating a proposition to build a state wagon road from Marblemount, in Skagit county, to Methow, a distance of 60 miles, for the purpose of opening up the mining districts for development.

FORTUNA, CAL.—Bids are asked until 10 a. m., Jan. 10, for constructing a portion of the Bridgeville and Trinity Road. O. D. Stern, Clk.

PETERBORO, ONT.—The council has received the following bids for furnishing a steam roadroller, according to reports: W. C. Oastler, Aveling & Porter roller, $3,200; Sawyer & Massey Co., Russell roller, $3,250; Buffalo Pitts Co., $3,450; R. E. H. Buckner, Aveling & Porter roller, single engine, $3,150; R. E. H. Buckner, Aveling & Porter roller, compound engine, $3,575; Harrisburg Foundry & Machine Works, $2,800.

MANUFACTURING PLANTS.

BERLIN, N. H.—A fire here Dec. 25 destroyed the pulp mill owned by Elias Thomas, Portland, Me.

LINCOLN, N. H.—The dressing mill of J. E. Henry & Sons was destroyed by fire Dec. 24. Estimated loss, about $100,000; insurance, $53,000.

AUBURN, N. Y.—C. A. Koenig, according to reports, contemplates the erection of a warehouse as an addition to his brewery plant.

LAUREL HILL (L. I.), N. Y.—A deed has been filed in the County Clerk's office transferring a tract of land to the Nichols Chemical Co. upon which the company contemplates the erection of its new plant.

SEABRIGHT, N. J.—Reports state that C. A. Rogers, Red Bank, N. J., has the contract for the erection of a building, 76 x 110 ft., for the manufacture of artificial ice and for cold storage. R. W. Gleason, Brooklyn, N. Y., is said to be interested.

PITTSBURG, PA.—It is reported that the Crystal Ice Co. will increase its capital stock from $200,000 to $300,000, and erect a new ice plant to cost about $100,000.

READING, PA.—The Reading Iron Co. contemplates the erection of a 1,700-ton blast furnace to replace the old Keystone furnace.

NEWPORT NEWS, VA.—A fire here Dec. 29 destroyed the foundry of Hugh and William Caskey, manufacturers of manganese composition metals. Reported loss, $35,000; insurance, $12,000.

CLARKSBURG, W. VA.—It is announced that the West Virginia Pulp & Paper Co., of Piedmont, W. Va., has decided to remove its plant, possibly to Clarksburg. David L. Lake, Treas.

ENSLEY CITY, ALA.—The Semet Solvay Bi-product plant was destroyed by fire Dec. 27; estimated loss, between $150,000 and $200,000.

KANKAKEE, ILL.—The Indiana Pipe Line & Refining Co., will erect a new plant, with a capacity of 3,000 bbls., to cost $35,000 to $40,000, according to reports.

PEORIA, ILL.—Reports state that a steam heating plant for this city is projected. W. H. Becker is said to be interested.

MILWAUKEE, WIS.—A fire Dec. 30 destroyed the dry-kiln of the Northside yards of the John Schroeder Lumber Co.; reported loss, about $70,000.——Reports state that F. A. Walsh will erect a brick building, 140 × 142 ft., to cost about $50,000, on South Water and Reed Sts.

MINNEAPOLIS, MINN.—A fire in this city Dec. 27 destroyed grain elevator "E," on 2d Ave. and 10th St.; estimated loss, $75,000; insurance, $50,000.——Fire destroyed grain elevator "X," of the Geo. C. Bagley Co., Dec. 28. Estimated loss; $200,000, fully insured.

KANSAS CITY, MO.—It is reported that John Kelly & Sons will erect a 5,000-bbl. mill, 55 × 110 ft., at this city.

DENISON, TEX.—The plant of the National Cotton Seed Oil Co. was destroyed by fire Dec. 25. Manager Feagle estimates the loss at $75,000.

HANFORD, CAL.—It is reported that a large winery will be erected in this place. F. A. West, Stockton Cal., and B. R. Kittredge, New York, are said to be interested.

SAN FRANCISCO, CAL.—A fire in this city, Jan. 2, damaged the building at 917 Stevenson St., occupied by the Krough Mfg. Co., makers of pumps and hydraulic machinery; reported loss, $50,000.

PORT DALHOUSIE, ONT.—The works of the Toronto Rubber Shoe Mfg. Co. at this place were destroyed by fire, Jan. 2, causing a reported loss of about $100,000; 250 hands were employed.

GAS PLANTS.

ITHACA, N. Y.—It is reported that the Ithaca Gas Light Co. will build a new plant next spring.

CLEVELAND, O.—Bids are asked until Jan. 28 for furnishing and maintaining 7,750 incandescent gas lamps for one year. Geo. R. Warden, Dir. Pub. Wks.

FOSTORIA, O.—Councilman R. A. Hale, 206 North Main St., writes us that a franchise has been granted to the Heat & Light Co., J. A. Rider, Engr., to construct and operate a gas and electric light plant. Machinery for the production of gas is to be purchased and a contract let for electrical machinery; the bids for the building have been received but the contract is not yet awarded. The estimated cost of the plant is from $200,000 to $250,000. Address J. A. Lewis, Heat & Light Co.

SPOKANE, WASH.—The Spokane Falls Gas Light Co. will erect a new plant next spring at a cost of $20,000, and lay about seven miles of mains. W. A. Aldrich, Secy.

BUTTE, IDAHO.—The Spokane Falls Gas Light Co. will construct a new $20,000 plant in the spring. W. A. Aldrich, Secy., Spokane, Wash.

NEW COMPANIES.—Converse Gas & Oil Co., Buffalo, N. Y.; $15,000; to drill wells, sell drilling machinery, connect pipe lines, refine oil, buy lands and rights of way, transport gas, oil and water, etc.; John T. Kilham, of Baldwinsville; J. W. Stearns, of Akron; A. M. Granger, George Wing and Louis F. Wing, of Buffalo.

Furnace Gas, Oil & Water Co., Raleigh, Ind.; $1,000; to drill and operate gas, oil and water wells; Robert Shafer, G. W. Legg, Jno. Ivan, Eugene L. Culbertson, W. Ewing.

Brast Oil & Gas Co., New Martinsville, W. Va.; $1,600, with $160 paid in; to lease oil lands and produce oil and gas; A. E. Brast, M. A. Brast, New Martinsville; W. C. Moore, W. H. Wingard, S. L. Jacobs, Piney, W. Va.

Graham-Loftus Oil Co, Santa Paula, Cal.; $40,000; to develop petroleum oil lands; S. G. Graham, Peru City; W. Loftus, Los Angeles; T. R. Bard, D. T. Perkins, Hueneme; C. H. McKevett, Santa Paula.

MISCELLANEOUS CONTRACTS.

DRY DOCK.—Astoria, Ore.—This place has petitioned congress for the construction of a governmet dry dock on the Columbia River.

BONDS.—Selkirk, Man.—Bids are asked until Jan. 23 for the purchase of $82,000 of bonds, accordink to reports. Thos. Partington, Town Clk.

PARK WORK.—Jersey City, N. J.—The street and water board have resolved to appropriate $100,000 for the acquirement and improvement of park sites.

BREAKWATER.—Seal Cove, N. B.—Reports state that funds are being raised for the construction of a breakwater toward which the government will be asked to contribute.

TELEPHONE CONDUITS.—Atlantic City, N. J.—The council received an agreement from the Delaware-Atlantic Telephone Co., Dec. 27, to place all wires in underground conduits.

SINKING A SHAFT.—Wilkes Barre, Pa.—Bids are asked by the Lehigh Valley Coal Co. until Jan. 7 for sinking a shaft 13 ft. 10 ins × 29 ft., with two hoistways and an airway, from the Baltimore to the Red Ash vein, a distance of about 435 ft. W. A. Lathrop, Gen. Supt., Wilkes Barre.

DREDGING.—Keweenaw Point, Mich.—Bids are asked until Feb. 3 for dredging in Portage Lake Ship Canals, as stated in our advertising columns. Maj. Clinton B. Sears, U. S. Engr., Duluth, Minn.

DREDGING, ETC.—Coos Bay, Ore.—W. N. Concanon, 40 New Montgomery St., San Francisco, Cal., has been awarded the contract, at $25,000, by the government, for dredging and removing rock.

STEAM DREDGE.—Montreal, Que.—A contract was awarded by the harbor commissioners Dec. 22, to Carrier, Lane & Co., Levis, Que., at $44,000, for the construction of a steam dredge with steel hull.

RIVER WORK.—Cleveland, O.—The diversion of the Cuyahoga River at the lower Seneca St. bridge and the straightening of Seneca St., has been proposed for next year. Geo. R. Warden, Dir. Pub. Wks.

STEAM FOG SIGNAL, ETC.—Erie, Pa.—Bids are asked until Jan. 20 for constructing a duplicate steam fog signal house and apparatus, at Presque Isle, Erie Harbor. Maj. Thos. W. Simons, U. S. Engr., Buffalo, N. Y.

PILING, ETC.—Fort Hancock, N. J.—Bids are asked until 12 m., Jan. 5, for renewing about 200 lin. ft. of sheet piling, shore protection, etc. Capt. G. G. Bailey, Asst. Q. M., Army Bldg., Whitehall St., New York.

TELEPHONE LINE.—Spangler, Pa.—It is reported that the North Cambria Telephone Co. will extend a line to Johnstown. T. O. Helfrick, Pres., and John S. Dunn, Treas., Spangler; M. F. Lampour, Secy., Nicktown.

PIER WORK.—Duluth, Minn.—Bids are asked until Feb. 1 for constructing the substructure of the north pier of the Duluth ship canal, as stated in our advertising columns. Maj. Clinton B. Sears, U. S. Engr., Duluth.

CANAL WORK.—Casper, Wyo.—F. S. Knittle, County Surveyor, has made a survey for the repair and completion of the Fort Fetterman canal, to cost about $3,000. Work will be commenced in the spring, according to reports.

STORAGE BATTERIES.—Fort Monroe, Va.—Bids are asked until Jan. 24 for furnishing and setting up four storage batteries, as stated in our advertising columns. Maj. Thos. L. Casey, U. S. Engr., 166 Granby St., Norfolk, Va.

FLOATING QUARANTINE STATION.—Havana, Cuba.—The U. S. marine hospital service awarded a contract Dec. 29 to the Kingston Ship & Engine Building Works, Kingston, Pa., for the construction of a floating quarantine station, to cost about $70,000, according to reports.

CONDUITS.—Washington, D. C.—A bill is before the district commissioners providing that all overhead wires for electric lighting purposes within the fire limits shall be laid in conduits. The Potomac Electric Light & Power Co. and the United States Electric Lighting Co. control the systems.

DRAINAGE.—Hackensack, N. J.—Reports state that C. C. Vermeule, Frederick W. Ward and Isaac M. Williams, of Essex county, have incorporated the New Jersey Land Reclamation & Improvement Co., to reclaim the Hackensack meadows, an area of about 27,000 acres, by filling in, constructing drains, dikes, etc.

REPAIRING DIKE.—Portland, Ore.—The following bids have been received by the U. S. engineer at Portland, for extending and repairing the Hayden Island dike, according to reports. John Howard, $13,130; Smith & Howard, $17,412; Joseph Paquet, $17,869; Wakefield & Jacobson, $14,686; Smith & Smith, $16,610.

ELECTRIC SUBWAYS.—Baltimore, Md.—Chief Engineer Phelps has outlined plans for the proposed subways, for placing the city electric wires underground in the district between Saratoga and Pratt Sts., and Greene St. and Jones' Falls. The conduits will be of vitrified clay carrying a cluster of four ducts of about four inches square each, in sections of 3½ ft. long. The subway commission will resume operations this month.

CONTRACT PRICES.

BRIDGE LUMBER.—Rochester, N. Y.—The Executive Board awarded a contract Dec. 28 for furnishing 106,500 ft. of oak, 80,662 ft. of pine, and 220,000 ft. of hemlock lumber to the city for repairs to bridges, to Geo. W. Crouch, at $20.90 per M. ft. for oak, $10.25 for pine, and $18.00 for hemlock. The lowest bidder was E. E. Ostrander, who was unknown to the board, Mr. Crouch being the second lowest bidder.

STREET IMPROVEMENTS.—Atlantic City, N. J.—The following bids were opened Dec. 27 for paving certain cross avenues, as advertised in Engineering News, the lowest bidder being the Delaware River Quarry & Construction Co., which is now paving Pacific Ave.; J. W. Hackney, Cy. Surv.:

Quantities.		Delaware River Quarry & Construct'n Co., $35,936.	T. J. McGovern, $36,663.	Jas. B. Reilly & Co., $36,830.	Alcatraz Paving Co., $37,177.
Macadam roadway*	21,340 sq. yds.	$0.79	$0.81	$0.78	$0.79
Vitrified brick†	5,025 " "	2.26	2.23	2.35	2.43
Concrete.§	137 cu. yds.	4.50	5.25	5.00	4.75
Straight curbing.....	13,840 lin. ft..	.47	.49	.50	.49
Curved curbing	512 " "	1.25	.30	1.49	1.30
Stone curbing reset..	100 " "	.10	.05	.08	.10

* Including excavation. †including concrete foundations and excavation (gutters). §Not covered by block pavement.

OIL AND GAS STREET LIGHTING.—Jersey City, N. J.—Local papers state that the following bids have been received for the lighting of certain portions of the city by oil and gas; for the former the New York & New Jersey Globe Gas Light Co. offered $1.73 a lamp a month, or $1.82, the contractor to do the glazing; or $20.76 a year, and $21.84 if the contractor does the glazing; the United Gas Improvement Co. bid for gas as follows:

	Glazing done by—	
Month.	City.	Contractor.
December	$2.67	$3.05
January	2.53	2.90
February	2.11	2.41
March	2.14	2.45
April	1.85	2.11
May	1.65	1.88
June	1.79	1.71
July	1.55	1.77
August	1.75	1.99
September	2.01	2.29
October	2.30	2.62
November	2.45	2.81

ELECTRIC STREET LIGHTING.—Philadelphia, Pa.—Contracts for electric street lighting during 1899 are said to have been awarded to the different companies as follows; the bids received being based on an estimate of 7,014 lights, at a total cost of $815,044, or $12,616 less than the amount paid to the different companies for the year 1898, when 7,008 lights were furnished:

Company.	No. of lights.	Cost per light.	Total.
Brush	400	$0.29	$42,340.00
"	1,283	.30	140,488.50
"	848	.31½	97,498.80
"	232	.33	27,944.40
Southern	182	.29	19,264.70
"	566	.32	66,108.80
"	503	.30½	55,996.48
"	6	.29	635.10
Powelton	30	.29	3,175.50
"	666	.32	77,788.80
Manufacturers	30	.33	3,175.50
"	482	.29	58,056.90
Diamond	81	.29	8,573.85
"	429	.33	51,673.05
Kensington	325	.34	40,332.50
Wissahickon	189	.34	23,454.90
Suburban	543	.35½	70,359.23
Germantown	219	.35¼	28,177.09
Total	7,014		$815,044.10

ENGINEERING MATERIAL PRICES.

TRACK MATERIALS—

New York—Angle bars, 1.05 cts. to 1.10 cts.; spikes, 1.35 cts. to 1.40 cts.; track bolts, haxagonal, 1.80 cts. to 1.85 cts.; square, 1.60 cts. to 1.65 cts.

Chicago—Angle bars, 1.10 cts.; spikes, 1.55 cts. to 1.60 cts.; track bolts, hexagonal, 1.90 cts. to 2.00 cts.; square, 1.80 cts. to 1.90 cts.

RAILS, STEEL—

New York, new, $19.00 to $20.00.

Chicago, new, $18.00 to $19.00; old iron, $12.75 to $13.00; steel, $8.00 to $11.00.

Pittsburg, new, $17.00 to $18.00; old iron, $14.00; old steel, $10.25.

STRUCTURAL STEEL—

New York—Beams, 1.35 cts. to 1.45 cts.; channels, 1.35 cts. to 1.45 cts.; tees, 1.45 cts. to 1.50 cts.; angles, 1.20 cts. to 1.25 cts.; rivets, 1.75 to 1.85 cts.

Chicago—Beams, 1.35 cts. to 1.50 cts.; channels, 1.35 cts. to 1.50 cts.; tees, 1.40 cts. to 1.50 cts.; angles, 1.30 cts. to 1.35 cts.

Pittsburg—Beams, 1.20 cts. to 1.30 cts.; channels, 1.20 cts. to 1.30 cts.; tees, 1.20 cts. to 1.25 cts.; angles, 1.10 cts. to 1.15 cts.

PLATES AND SHEETS—

New York—Universal mill plates, 1.30 cts. to 1.35 cts.; tank, 1.35 cts. to 1.40 cts.; shell, 1.40 cts. to 1.45 cts.; flange, 1.60 cts. to 1.70 cts.; firebox, 2.25 to 2.50 cts.

Chicago—Universal mill plates, 1.40 cts. to 1.45 cts.; tank, 1.25 cts. to 1.30 cts.; shell, 1.55 cts. to 1.60 cts.; flange, 1.30 cts. to 1.50 cts.; firebox, 1.75 cts. to 4.00 cts.; sheets, 2.00 cts. to 2.10 cts.

Pittsburg—Universal mill plates, 1.20 cts. to 1.25 cts.; tank, 1.20 cts. to 1.25 cts.; shell, 1.45 cts. to 1.50 cts.; flange, 1.35 cts. to 1.40 cts.; firebox, 1.65 cts. to 2.75 cts.; sheets, 1.85 cts. to 1.95 cts.

MERCHANT STEEL—

Machinery, per lb., 1.60 cts. to 1.70 cts.

Tool, per lb., 5.50 cts. to 7 cts.

IRON—

Pig iron:

New York—No. 1, $11.70 to $11.75; No. 2, $11.00 to $11.25.

Chicago—No. 1, $11.50 to $12.50; No. 2, $11.00 to $12.00.

Pittsburg—No. 1, $10.50 to $10.75; No. 2, $10.00 to $10.25.

Bar iron:

New York, common, 1.10 cts. to 1.15 cts.; refined 1.50 cts. to 1.60 cts.

Chicago, common, 1.05 cts. to 1.10 cts.; refined, 1.15 cts. to 1.20 cts.

Sheets:

Common, American per lb., 2.15 cts. to 2.75 cts.

Russia, per lb., 10½ cts. to 11.00 cts.

LUMBER—

New York:

Hemlock timber, 20 ft. and under, per M, $12.00 to $12.50.

Piling, Eastern spruce, 35 to 40 ft., 30 to 40% 12-in. butts, 4.25 cts.

Spruce, special cargoes, per M, $15.00 to $17.50.

Yellow pine, random cargoes, $15.50 to $17.00.

North Carolina pine, $2.25 to $2.40 advance over Norfolk rates.

San Francisco:

Oregon pine, per M, $15.50 to $17.50.

Redwood, per M, $18.20 to $20.00.

Redwood tank stock, up to 10 ft., $24.00 to $25.00.

GENERAL MATERIALS—

Lead, New York, 3.85 cts. to 3.90 cts.

Nails, Pittsburg, 1.40 cts.

Solder, per lb., 8½ cts. to 13 cts.

Spelter, per lb., 4.80 cts. to 13.00 cts.

Copper ingots, 12.85 cts. to 13.00 cts.

Granite, rough, New York, cu. ft., 40 cts. to 50 cts.

Limestone, New York, cu. ft., 70 cts. to 80 cts.

Ohio freestone, New York, cu. ft., 85 cts. to 90 cts.

Slate, Penn., block, per square, $4.00 to $5.00.

White lead, American, per lb., 5¼ cts. to 6 cts.

Lime, common state, per bbl., 75 cts.

INDUSTRIAL NOTES.

THE ROGERS LOCOMOTIVE CO., Paterson, N. J., is reported to have just received an order for 45 locomotives for the Pacific Coast.

THE CHARLES HILLMAN SHIP & ENGINE BUILDING CO., Philadelphia, is reported to have made an assignment. Mr. Charles Hillman, President of the company, died Dec. 22, as was reported in our last issue.

THE Q. & C. CO., Chicago, manufacturers of railway specialties, will, in January, remove its New York offices from 100 Broadway to the corner of Liberty and Church Sts., where it will have combined offices and salesroom, carrying a considerable stock of machinery and tools of its own manufacture.

CONTRACTS FOR STEEL RAILS are about to be let by the Pennsylvania R. R. Co. as follows, according to press reports: Cambria Steel Co., 30,000 tons; Pennsylvania Steel Co., 30,000; Carnegie Steel Co., 30,000; Federal Steel Co., 10,000; Lackawanna Steel Co., 5,000; making a total of 105,000 tons.

THE SCHOENBERGER STEEL CO., Pittsburg, has contracted with the A. Garrison Foundry & Machine Co., Pittsburg, for machinery for a new wire rod mill, reported as to cost $250,000. Local papers state that the new mill will have a capacity of 400 tons every 24 hours and will be in operation in about five months. It is also stated that neither the Schoenberger nor the Oliver companies are members of the wire combine. The main building for the new wire mill will be 130 × 220 ft., and will be erected by the Riter-Conley Mfg. Co.

THE KENSINGTON SHIP & ENGINE BUILDING WORKS, Philadelphia, is reported to have a contract from the U. S. Government for a disinfecting barge, to cost $70,000, for use in the harbors of Havana and Santiago, Cuba, and San Juan, Porto Rico. It will be 162 ft. long, 32 ft. beam and capable of fumigating the clothing of 1,000 persons daily. It will be known as the "Protector."

THE BERLIN IRON BRIDGE CO., East Berlin, Conn., is furnishing and erecting the steel work of a new plant for the United Gas Improvement Co., Gloversville, N. Y., consisting of generator and boiler and engine house, about 50 × 80 ft., of fireproof construction throughout. The side walls are of brick and the roof framing of steel, supporting slate roof covering. The trusses are clear span, resting directly on the side walls of brick.

THE BALDWIN LOCOMOTIVE WORKS, Philadelphia, begins the year, says the Philadelphia "Record," with orders for 200 locomotives. During 1898 the works turned out 760 complete locomotives, many of which went to Japan and Russia. In 1897 only 501 were built, while 940 were constructed in 1891. Owing to the increased size, however, the 760 built last year represent in workmanship and cost almost as much as did the 940 of 1891.

THE SOUTH AMERICAN GENERAL ELECTRIC SUPPLY CO. is the name of a new concern incorporated for the purpose of selling American electrical supplies in Central and South American countries. The incorporators are all connected with the General Electric Co., Schenectady, N. Y., and it is understood that the company is the outcome of an effort on the part of the General Electric Co. to control more distinctively its foreign agencies.

THE RITER-CONLEY MFG. CO., Pittsburg, Pa., has a contract, according to report, for three buildings and extensions for the plant of the Michigan Alkali Co., Wyandotte, Mich., which is about to begin the manufacture of cement from the by-products of its soda ash plant. The main building will be 85 × 223 ft., with a lean-to and platform, and the smaller buildings will be 50 × 80 ft. and 30 × 50 ft., respectively. They will be of structural steel, with roofs and sides of corrugated iron.

THE NEW YORK AUTOTRUCK CO. has been incorporated with a capital stock of $1,000,000, to employ automobile trucks for general trucking service in New York city. It is understood that the company will employ wagons operated by compressed air engines made by the American Wheelock Engine Co., of Worcester, Mass. The plans of the company as given out contemplate hauling and delivering goods for merchants on a per ton per mile schedule at so low a figure that the maintaining of a private horse delivery system as is at present done will be a luxury.

THE PAGE WOVEN WIRE FENCE CO., Adrian, Mich., on Dec. 14, shipped a train load to Nebraska, consisting of 30 cars, containing 400 miles of Page fence, which was ordered by its local agents to fill orders already taken for spring delivery. Dec. 30, another full train load, consisting of 37 cars, containing over 500 miles of Page fence, was to be shipped to E. C. Musgrave, Des Moines, Ia. Besides those just mentioned, two more full train loads will be shipped within the next 60 to 90 days in addition to the usual daily shipments. The company states that its looms are running 22 hours on six days of the week.

THE CLIMAX ROAD MACHINE CO., Marathon, N. Y., reports that its 1898 sales have been a little over 155% of those for 1897, which was the largest business previously done. The demand for crushers has caused the running of the plant day and night for about four months and overtime for the entire summer. Although this is the dull season of the year the stone crusher shop is being run full time and the road machine shop will commence operations, it is hoped, about six weeks earlier than usual as the company has practically closed out its stock and all indications point to a large demand for this year.

THE CAMBRIA STEEL CO., Philadelphia, having leased the Cambria Iron Co.'s works, has consolidated its New York offices, formerly at 100 Broadway and 33 Wall St., at rooms 1705 and 1706, Empire Building, 71 Broadway. Mr. H. L. Waterman has been appointed general sales agent for New York and vicinity, and will also give his attention to the sale of structural steel, steel blooms, billets and slabs. Mr. W. A. Washburn will negotiate the sale of steel rails and railway track fastenings, and Mr. L. R. Pomeroy will have charge of steel axles and other forging specialties. Mr. Thos. F. Russell, 102 Chambers St., New York, will sell as heretofore the special products of the Gautier Department.

THE FISCHER EQUIPMENT CO., Chicago, is reported in newspaper dispatches to have closed a contract with the American Motor Agency, Paris, France, through Count De Jotemps, President of the latter, for about $5,000,000 worth of motor vehicles. The company is to furnish 500 vehicles of the Wood motor pattern a year for the next 10 years, it is stated, the first installment to be delivered in Paris not later than March 15. The reports state that the agency has also made contracts with the Holyoke Motor Co., Holyoke, Mass., manufacturer of a gasoline motor carriage; the Overman Wheel Co., Chicopee Falls, Mass., making a light gasoline motor carriage, and the Stanley Automatic Carriage Co., Newton, Mass., maker of a steam motor carriage. The combined contracts are said to call for 1,500 vehicles to be delivered yearly for the next 10 years, the aggregate price to be paid being about $15,000,000.

THE NATIONAL SWITCH & SIGNAL CO. announces the completion of its consolidation with the Union Switch & Signal Co. We are informed that all of the apparatus heretofore manufactured by the Johnson Railroad Signal Co., the National Switch & Signal Co. and the Union Switch & Signal Co. will be supplied by the Union Switch & Signal Co., under which title all business will be conducted. The works at Swissvale and Easton, Pa., will be improved and maintained so as to secure a minimum cost of production, with maximum facilities for handling the business. The Department of Sales and Installation has been created with Mr. Charles Hansel, C. E. (formerly Vice-President and General Manager of the National Switch & Signal Co.), as Manager, with offices at 43 Cedar St., New York city, and he announces the following appointments, effective January 1st, 1899: Mr. Henry M. Sperry (formerly Signal Engineer and Western Agent of the National Switch & Signal Co.), as Signal Engineer and Representative, with office at 43 Cedar St., New York city. Mr. V. K. Spicer (formerly Signal Engineer and Agent, Western District of the Union Switch & Signal Co.), as Signal Engineer and Representative, with office at 1535 Monadnock Building, Chicago. This department will have full charge of all quotations for contracts and material and the installation of all work. All correspondence should be directed to it.

Contract Work Should Always be Advertised in a Paper Read by Contractors.

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PERSONAL.

Mr. C. R. Felton has been appointed City Engineer of Brockton, Mass., to succeed Mr. B. R. Chapman.

Mr. Ernest H. Brownell, Assoc. M. Am. Soc. C. E., has opened an office in the Brownell Building, Providence, R. I.

Mr. Charles H. Gannett, civil engineer, of Boston, Mass., was married Jan. 4, to Miss Mary Lyman, of Arlington, Mass.

Major Charles H. Hudson, Chief Engineer of the Southern Ry., with headquarters in Washington, D. C., has resigned.

Mr. Jeremiah J. Desmond has been appointed a member of the water board of Lawrence, Mass., to succeed Mr. Junkins.

Prof. Floyd Davis, of Des Moines, Ia., has been engaged to examine the water furnished by the Oshkosh Water-Works Co. to the city of Oshkosh, Ia.

Mr. Herbert J. Bowman, civil engineer, at one time Superintendent of the water-works at Berlin, Ont., has been elected Water Commissioner of that town.

Messrs. Burns & McDonnell, civil, hydraulic and structural engineers, have removed their offices from 306 New England Bldg., Kansas City, Mo., to 406 Postal Telegraph Bldg., in the same city.

Mr. Lewis E. Fischer, civil engineer, of St. Louis, Mo., has been appointed City Engineer of Paris, Ill. He is a graduate of the Engineering Department of the University of Illinois, Champaign, Ill.

Mr. John W. Gates, President of the Illinois Steel Co., Chicago, has resigned to accept a similar position with the American Steel & Wire Co., Chicago. Mr. E. J. Buffington has been elected to succeed him.

Messrs. B. C. Ball and W. H. Corbett, civil engineers, have formed a partnership under the firm name of Ball & Corbett, consulting and contracting engineers, with offices at 39 Cortlandt St., New York.

Mr. Manuel J. Martinez, M. Am. Soc. M. E., of Yonkers, N. Y., has been appointed Resident Agent at Havana, Cuba, for the Aultman & Taylor Machinery Co., Mansfield, O., manufacturers of the Cahall water tube boiler.

Mr. Walter S. Wyman, electrical engineer, who has been in the employ of the Waterville Water Co. for several years, has been appointed General Manager of the Waterville & Fairfield St. Ry. & Light Co., Waterville, Me.

Mr. John K. Lencke, connected with the Q & C Co., Chicago, Ill., sailed on the "Majestic," Jan. 11, for a trip through England, Germany, Russia, Sweden and Denmark in connection with devices manufactured by the company.

Mr. Henry G. Issertel, lately Manager of the Boston office of the Walker Co., Cleveland, O., has accepted the position of Manager for the New England states of the Anchor Electric Co., Boston, Mass., with headquarters at 1001 Havemeyer Bldg., New York city.

Mr. F. L. Sheppard, General Superintendent of the Pennsylvania R. R., with headquarters at Altoona, Pa., has been transferred in the same capacity to the United Railroads of New Jersey Division with headquarters at Jersey City, N. J., to succeed Mr. F. Wolcott Jackson, whose promotion was noted in our last issue.

Mr. W. J. Clark, formerly of the Railway Department of the General Electric Co., Schenectady, N. Y., has accepted the position of General Manager of the Foreign Department, with headquarters in New York city, succeeding Mr. D. Mazenet, who has accepted the position of Managing Director of the Mexican General Electric Co., with offices in the City of Mexico.

Mr. Benjamin Reece, M. Am. Soc. C. E., has resigned his position as engineer of the Continuous Rail Joint Co., of America, Newark, N. J., and has associated himself with the Diamond State Iron Co., Wilmington, Del. His office will be in Philadelphia, Pa., and he will have charge of the company's track material specialties, including spikes, tie-plates and the Churchill rail joint.

Mr. Albert A. Cary, M. Am. Soc. M. E., has opened an office at 95 Liberty St., New York city, for practice as a Consulting Mechanical Engineer, making a specialty of steam engineering work and expert work in connection with legal proceedings. Mr. Cary was for several years engineering manager of the Abendroth & Root Mfg. Co., makers of the Root boiler, and more recently has been in charge of the New York office of the Monarch Mfg. Co., of Waterbury, Conn., makers of the Monarch engine stop.

Brig.-Gen. Henry L. Abbott, Corps of Engineers, U. S. Army, arrived in New York, Jan. 9, from France, on the steamer "La Champagne." He is a member of the International Technical Commission, composed of engineers representing the United States, Great Britain, France, Russia, Germany and Colombia, which recently reviewed and reported upon the plans of the New Panama Canal Co. He will proceed to Washington, D. C.

The Canadian Government Commission, appointed to examine the docks, harbor improvements and terminal facilities of the principal harbors of the United States, visited New York Harbor, Jan. 9. Among the engineers on the commission are: Mr. John Kennedy, M. Am. Soc. C. E., Chief Engineer to the Harbor Commissioners, Montreal, Que., who is the Engineer of the Commission; Mr. P. W. St. George, City Engineer of Montreal, and Mr. Eugene D. Lafleur, Acting Chief Engineer. Mr. Robert McKay is the President of the Commission and Mr. David Seath is its Secretary.

Mr. Ira Grant Hedrick, Assoc. M. Am. Soc. C. E., who has been for some years Principal Assistant Engineer to Mr. J. A. L. Waddell, M. Am. Soc. C. E., consulting engineer, Kansas City, Mo., has been taken into partnership by Mr. Waddell under the firm name of Waddell & Hedrick, consulting engineers. Mr. Hedrick has been in charge of Mr. Waddell's Kansas City office and has held a very responsible position in the business. The new firm will retain Mr. Waddell's offices in the Gibraltar Building, Kansas City, and will make a specialty of bridges, elevated railways and structural steel-work in general. Mr. Andrew E. Foye is the New York representative of the firm, with offices in the Bowling Green Building, 11 Broadway.

OBITUARY.

Mr. Robert Fenton, civil engineer, of Willimantic, Conn., died Jan. 1, aged 55.

Mr. Horace Clark, contractor, of Poughkeepsie, N. Y., died Dec. 29, aged 66.

Mr. Arthur Stanley Cochran, architect, of Philadelphia, Pa., died Jan. 1, aged 34.

Mr. Daniel Fehl, Superintendent of Highways of McKeesport, Pa., died Jan. 6, aged 67.

Mr. W. Dewees Wood, the well-known sheet-iron manufacturer, of Pittsburg, Pa., died Jan. 2, aged 72.

Mr. Draper Smith, President of the Plymouth Light, Heat & Power Co., and of the Plymouth Water Co., of Plymouth, Pa., died Jan. 5, aged 83.

Mr. George H. Frey, civil engineer, of New York city, died in the Presbyterian Hospital in that city, Jan. 3, aged 35. He was for many years engaged in the practice of his profession in South America and South Africa.

Col. Gustavus S. Innis, civil engineer and surveyor, of Columbus, O., died Jan. 2. He was born in Franklinton, O., Feb. 4, 1819, and received his education in the public schools and the Central High School. He became a surveyor, and at the outbreak of the Civil War enlisted in the Union Army, where he attained the rank of Colonel. He was a member of the Civil Engineers' Association of Columbus.

Mr. Joseph Pearson Gill, civil engineer, of New York city, died at his home, Jan. 9, aged 80. He was born near Trenton, N. J., and entered the U. S. Navy, serving through the Mexican War. At the close of the war he resigned from the navy and began the study of engineering in Philadelphia. Among important works built by him during his professional career were the railway from Trenton to Belvidere and the gas works at Lewiston, Me., Jersey City, N. J., and Petersburg, Va. He lived in Lewiston, Me., for 20 years and afterwards in Newark, N. J., until several years ago when he moved to New York.

Dr. Ezra Otis Kendall, Emeritus Professor of Mathematics and Astronomy and Honorary Dean of the Faculty, of the University of Pennsylvania, died in Philadelphia, Pa., Jan. 5. He was born in Wilmington, Mass., May 15, 1816, and came to Philadelphia in 1835. After a course of instruction under his half-brother, the Mathematician, Sears C. Walker, he was appointed Professor of Theoretical Astronomy and Mathematics in the Central High School of that city and filled this position for 20 years. In 1855 he was appointed Professor of Mathematics and Astronomy in the University of Pennsylvania and held that chair until 1890, when he was made Professor Emeritus. He made a series of systematic observations for longitude for the U. S. Coast Survey and contributed largely to the U. S. Ephemeris and Nautical Almanac. He also edited several scientific works, and for 23 years was Secretary of the American Philosophical Society, having become a member of that society in 1842.

Mr. William H. Schultz, at one time Master Mechanic of the old Philadelphia, Germantown & Morristown R. R., died in Wilmington, Del., Jan. 3. He was born in Westphalia, Germany, Feb. 19, 1805, and learned the machinist's trade. In 1832 he came to this country and settled in Baltimore, Md. About two years later he became Master Mechanic of the Philadelphia, Germantown & Norristown R. R., having charge of the locomotive shops in Philadelphia. In 1839 he entered the employ of the Norris Locomotive Works, Philadelphia, and in 1840 was sent to Berlin to develop and operate a short railway from Potsdam to Berlin for the king. A year later he received an offer from the Emperor of Russia to take charge of the only railway in the empire and remained there also a year. In 1852 he returned to Philadelphia and became Master Mechanic and General Superintendent of the Camden & Atlantic Ry., which position he held for many years. He was the inventor of a number of improvements in locomotive details.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

NEW YORK ELECTRICAL SOCIETY.
Jan. 12. "Latest Progress in Storage Battery Installations," Joseph Appleton. Secy., Geo. H. Guy, 120 Liberty St., New York city.

BROOKLYN ENGINEERS' CLUB.
Jan. 12. "Notes on Street Paving Materials and Their Uses," Nelson P. Lewis. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.

CENTRAL RAILWAY CLUB.
Jan. 13. Secy., H. D. Vought, 114 Fifth Ave., New York city.

WISCONSIN STATE CHEMICAL ASSOCIATION.
Jan. 13. Secy., I. Ladoff, 154 Knapp St., Milwaukee, Wis.

ST. LOUIS RAILWAY CLUB.
Jan. 13. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

SCRANTON ENGINEERS' CLUB.
Jan. 14. Annual meeting. Secy., F. E. Pratt, 730 Madison Ave., Scranton, Pa.

MONTANA SOCIETY OF ENGINEERS.
Jan. 14. Annual meeting, Helena, Mont. Secy., A. S. Hovey, National Bank Bldg., Helena, Mont.

TECHNICAL SOCIETY OF NEW YORK.
Jan. 14. "The Latest Changes in International Patent Law," Paul Goepel, Secy., F. H. Gottlieb, 192 Third Ave., New York city.

AMERICAN INVENTORS' AND MANUFACTURERS' ASSOCIATION.
Jan. 15. Annual meeting, Washington, D.C. Secy., Arthur Steuart, Washington Loan & Trust Bldg., Washington, D. C.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.
Jan. 16. Secy., Marshall Morris, 16 Norton Bldg., Louisville, Ky.

TECHNICAL CLUB OF OMAHA.
Jan. 16. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' CLUB OF MINNEAPOLIS.
Jan. 16. Secy., H. E. Smith, 1620 S. E. 14th St., Minneapolis, Minn.

FRANKLIN INSTITUTE.
Jan. 17. "The Clarification and Purification of Municipal Water Supplies," Mr. Allen Hazen. Jan. 20. "This Country of Ours," John Birkinbine. Secy., Wm. H. Wahl, 15 South 7th St., Philadelphia, Pa.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA
Jan. 17. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

WESTERN RAILWAY CLUB.
Jan. 17. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

WESTERN SOCIETY OF ENGINEERS.
Jan. 18. "Establishment of Street Grades," Charles P. Chase. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

ENGINEERS' CLUB OF ST. LOUIS.
Jan. 18. Secy., E. R. Fish, 2401 N. Spring Ave., St. Louis, Mo.

BOSTON SOCIETY OF CIVIL ENGINEERS.
Jan. 18. Annual meeting. Secy., S. E. Tinkham, City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION.
Jan. 18. Secy., B. M. Gardner, 1522 Monadnock Block, Chicago, Ill.

ENGINEERS' AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.
Jan. 18. Secy., Frank H. Olmsted, Byrne Bldg., Los Angeles, Cal.

THE IOWA ENGINEERING SOCIETY.
Jan. 18-19. Annual meeting, Iowa City Ia. Secy., E.P. Boynton, Cedar Rapids, Ia.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
Jan. 18-19. Annual meeting, New York city. Secy., C. W. Hunt, 220 West 57th St., New York city.

NEW YORK RAILROAD CLUB.
Jan. 19. "Railway Signaling," Charles Hansel. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.

ENGINEERS' CLUB OF CINCINNATI.
Jan. 19. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
Jan. 19. Secy., F. A. Charpiot, P. O. Box 13, Savannah, Ga.

THE WEST VIRGINIA SOCIETY OF CIVIL ENGINEERS AND ARCHITECTS.
Jan. 19-20. Annual meeting, Charleston, W.Va. Secy., W. Steenbergen, Point Pleasant, W. Va.

NORTHWESTERN ELECTRICAL ASSOCIATION.
Jan. 19-21. Semi-annual meeting, Milwaukee, Wis. Secy., Thos. R. Mercein, 511 Montgomery Bldg., Milwaukee, Wis.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
Jan. 20. Annual meeting, Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

AMERICAN INSTITUTE, and the HENRY ELECTRICAL SOCIETY.
Jan. 20. "Alternating Currents," Wm. H. Freedman. Secy., D. R. Lovejoy, 111 W. 38th St., New York city.

ROCHESTER ENGINEERING SOCIETY.
Jan. 20. Secy., John F. Skinner, Reynolds Library Bldg., Rochester, N. Y.

THE DETROIT ENGINEERING SOCIETY.
Jan. 20. Secy., Henry Goldmark, Wayne Co. Savings Bank Bldg., Detroit, Mich.

CHICAGO ELECTRICAL ASSOCIATION.
Jan. 20. "Observations on Ventilating Fans," Gerard Swope. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

THE ENGINEERS' CLUB OF PHILADELPHIA.
Jan. 21. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

ENGINEERS' CLUB OF COLUMBUS.
Jan. 21. Secy., H. M. Gates, 12½ North High St., Columbus, O.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Jan. 24. Secy., Wm. H. Searles, Case Library Bldg., Cleveland.

NATIONAL ASSOCIATION OF MANUFACTURERS.
Jan. 24-26. Annual convention, Cincinnati, O. Secy., E. P. Wilson, Room A, Chamber of Commerce, Cincinnati, O.

INDIANA ENGINEERING SOCIETY.
Jan. 24-26. Annual meeting, Indianapolis, Ind. Secy., J. B. Nelson, 61 Baldwin Block, Indianapolis, Ind.

DREDGING.—Keweenaw Point, Mich.—Bids are asked until Feb. 3 for dredging in Portage Lake Ship Canals, as stated in our advertising columns. Maj. Clinton B. Sears, U. S. Engr., Duluth, Minn.

DREDGING, ETC.—Coos Bay, Ore.—W. N. Concanon, 40 New Montgomery St., San Francisco, Cal., has been awarded the contract, at $25,000, by the government, for dredging and removing rock.

STEAM DREDGE.—Montreal, Que.—A contract was awarded by the harbor commissioners Dec. 22, to Carrier, Lane & Co., Levis, Que., at $44,000, for the construction of a steam dredge with steel hull.

RIVER WORK.—Cleveland, O.—The diversion of the Cuyahoga River at the lower Seneca St. bridge and the straightening of Seneca St., has been proposed for next year. Geo. R. Warden, Dir. Pub. Wks.

STEAM FOG SIGNAL, ETC.—Erie, Pa.—Bids are asked until Jan. 20 for constructing a duplicate steam fog signal house and apparatus, at Presque Isle, Erie Harbor. Maj. Thos. W. Simons, U. S. Engr., Buffalo, N. Y.

PILING, ETC.—Fort Hancock, N. J.—Bids are asked until 12 m., Jan. 5, for renewing about 200 lin. ft. of sheet piling, shore protection, etc. Capt. G. G. Bailey, Asst. Q. M., Army Bldg., Whitehall St., New York.

TELEPHONE LINE.—Spangler, Pa.—It is reported that the North Cambria Telephone Co. will extend a line to Johnstown. T. O. Helfrick, Pres., and John S. Dunn, Treas., Spangler; M. F. Lampour, Secy., Nicktown.

PIER WORK.—Duluth, Minn.—Bids are asked until Feb. 1 for constructing the substructure of the north pier of the Duluth ship canal, as stated in our advertising columns. Maj. Clinton B. Sears, U. S. Engr., Duluth.

CANAL WORK.—Casper, Wyo.—F. S. Knittle, County Surveyor, has made a survey for the repair and completion of the Fort Fetterman canal, to cost about $3,000. Work will be commenced in the spring, according to reports.

STORAGE BATTERIES.—Fort Monroe, Va.—Bids are asked until Jan. 24 for furnishing and setting up four storage batteries, as stated in our advertising columns. Maj. Thos. L. Casey, U. S. Engr., 166 Granby St., Norfolk, Va.

FLOATING QUARANTINE STATION.—Havana, Cuba.—The U. S. marine hospital service awarded a contract Dec. 29 to the Kingston Ship & Engine Building Works, Kingston, Pa., for the construction of a floating quarantine station, to cost about $70,000, according to reports.

CONDUITS.—Washington, D. C.—A bill is before the district commissioners providing that all overhead wires for electric lighting purposes within the fire limits shall be laid in conduits. The Potomac Electric Light & Power Co. and the United States Electric Lighting Co. control the systems.

DRAINAGE.—Hackensack, N. J.—Reports state that C. C. Vermeule, Frederick W. Ward and Isaac M. Williams, of Essex county, have incorporated the New Jersey Land Reclamation & Improvement Co., to reclaim the Hackensack meadows, an area of about 27,000 acres, by filling in, constructing drains, dikes, etc.

REPAIRING DIKE.—Portland, Ore.—The following bids have been received by the U. S. engineer at Portland, for extending and repairing the Hayden Island dike, according to reports. John Howard, $13,130; Smith & Howard, $17,412; Joseph Paquet, $17,869; Wakefield & Jacobson, $14,686; Smith & Smith, $16,610.

ELECTRIC SUBWAYS.—Baltimore, Md.—Chief Engineer Phelps has outlined plans for the proposed subways, for placing the city electric wires underground in the district between Saratoga and Pratt Sts., and Greene St. and Jones' Falls. The conduits will be of vitrified clay carrying a cluster of four ducts of about four inches square each, in sections of 3½ ft. long. The subway commission will resume operations this month.

CONTRACT PRICES.

BRIDGE LUMBER.—Rochester, N. Y.—The Executive Board awarded a contract Dec. 28 for furnishing 106,500 ft. of oak, 80,662 ft. of pine, and 220,000 ft. of hemlock lumber to the city for repairs to bridges, to Geo. W. Crouch, at $20.90 per M. ft. for oak, $10.25 for pine, and $18.00 for hemlock. The lowest bidder was E. E. Ostrander, who was unknown to the board, Mr. Crouch being the second lowest bidder.

STREET IMPROVEMENTS.—Atlantic City, N. J.—The following bids were opened Dec. 27 for paving certain cross avenues, as advertised in Engineering News, the lowest bidder being the Delaware River Quarry & Construction Co., which is now paving Pacific Ave.; J. W. Hackney, Cy. Surv.:

Quantities.		Delaware River Quarry & Construct'n Co., $35,936.	T. J. McGovern, $36,663.	Jas. B. Reilly & Co., $36,830.	Alcatraz Paving Co., $37,177.
Macadam roadway*	21,340 sq. yds.	$0.79	$0.81	$0.78	$0.79
Vitrified brick†	5,025 " "	2.26	2.23	2.35	2.43
Concrete.§	137 cu. yds.	4.50	5.25	5.00	4.75
Straight curbing	13,840 lin. ft.	.47	.49	.50	.49
Curved curbing	512 " "	1.25	.30	1.49	1.30
Stone curbing reset	100 " "	.10	.05	.08	.10

* Including evcavation. †including concrete foundations and excavation (gutters). §Not covered by block pavement.

OIL AND GAS STREET LIGHTING.—Jersey City, N. J.—Local papers state that the following bids have been received for the lighting of certain portions of the city by oil and gas; for the former the New York & New Jersey Globe Gas Light Co. offered $1.73 a lamp a month, or $1.82, the contractor to do the glazing; or $20.76 a year, and $21.84 if the contractor does the glazing; the United Gas Improvement Co. bid for gas as follows:

Month.	Glazing done by— City.	Contractor.
December	$2.67	$3.05
January	2.53	2.90
February	2.11	2.41
March	2.14	2.45
April	1.85	2.11
May	1.65	1.88
June	1.79	1.71
July	1.55	1.77
August	1.75	1.99
September	2.01	2.29
October	2.30	2.62
November	2.45	2.81

ELECTRIC STREET LIGHTING.—Philadelphia, Pa.—Contracts for electric street lighting during 1899 are said to have been awarded to the different companies as follows; the bids received being based on an estimate of 7,014 lights, at a total cost of $815,044, or $12,616 less than the amount paid to the different companies for the year 1898, when 7,008 lights were furnished:

Company.	No. of lights.	Cost per light.	Total.
Brush	400	$0.29	$42,340.00
"	1,283	.30	140,488.50
"	848	.31½	97,498.80
"	232	.33	27,944.40
Southern	182	.29	19,264.70
"	566	.32	66,108.80
"	503	.30½	55,996.48
"	6	.29	635.10
Powelton	30	.29	3,175.50
"	666	.32	77,788.80
Manufacturers	30	.33	3,175.50
"	482	.29	58,056.90
Diamond	81	.29	8,573.85
"	429	.33	51,673.05
Kensington	325	.34	40,332.50
Wissahickon	189	.34	23,454.90
Suburban	543	.35½	70,359.23
Germantown	219	.35¼	28,177.09
Total	7,014		$815,044.10

ENGINEERING MATERIAL PRICES.

TRACK MATERIALS—

New York—Angle bars, 1.05 cts. to 1.10 cts.; spikes, 1.35 cts. to 1.40 cts.; track bolts, haxagonal, 1.80 cts. to 1.85 cts.; square, 1.60 cts. to 1.65 cts.

Chicago—Angle bars, 1.10 cts.; spikes, 1.55 cts. to 1.60 cts.; track bolts, hexagonal, 1.90 cts. to 2.00 cts.; square, 1.80 cts. to 1.90 cts.

RAILS, STEEL—

New York, new, $19.00 to $20.00.

Chicago, new, $18.00 to $19.00; old iron, $12.75 to $13.00; steel, $8.00 to $11.00.

Pittsburg, new, $17.00 to $18.00; old iron, $14.00; old steel, $10.25.

STRUCTURAL STEEL—

New York—Beams, 1.35 cts. to 1.45 cts.; channels, 1.35 cts. to 1.45 cts.; tees, 1.45 cts. to 1.50 cts.; angles, 1.20 cts. to 1.25 cts.; rivets, 1.75 to 1.85 cts.

Chicago—Beams, 1.35 cts. to 1.50 cts.; channels, 1.35 cts. to 1.50 cts.; tees, 1.40 cts. to 1.50 cts.; angles, 1.30 cts. to 1.35 cts.

Pittsburg—Beams, 1.20 cts. to 1.30 cts.; channels, 1.20 cts. to 1.30 cts.; tees, 1.20 cts. to 1.25 cts.; angles, 1.10 cts. to 1.15 cts.

PLATES AND SHEETS—

New York—Universal mill plates, 1.30 cts. to 1.35 cts.; tank, 1.35 cts. to 1.40 cts.; shell, 1.40 cts. to 1.45 cts.; flange, 1.60 cts. to 1.70 cts.; firebox, 2.25 to 2.50 cts.

Chicago—Universal mill plates, 1.40 cts. to 1.45 cts.; tank, 1.25 cts. to 1.30 cts.; shell, 1.55 cts. to 1.60 cts.; flange, 1.30 cts. to 1.50 cts.; firebox, 1.75 cts. to 4.00 cts.; sheets, 2.00 cts. to 2.10 cts.

Pittsburg—Universal mill plates, 1.20 cts. to 1.25 cts.; tank, 1.20 cts. to 1.25 cts.; shell, 1.45 cts. to 1.50 cts.; flange, 1.35 cts. to 1.40 cts.; firebox, 1.65 cts. to 2.75 cts.; sheets, 1.85 cts. to 1.95 cts.

MERCHANT STEEL—

Machinery, per lb., 1.60 cts. to 1.70 cts.

Tool, per lb., 5.50 cts. to 7 cts.

IRON—

Pig iron:

New York—No. 1, $11.70 to $11.75; No. 2, $11.00 to $11.25.

Chicago—No. 1, $11.50 to $12.50; No. 2, $11.00 to $12.00.

Pittsburg—No. 1, $10.50 to $10.75; No. 2, $10.00 to $10.25.

Bar iron:

New York, common, 1.10 cts. to 1.15 cts.; refined 1.50 cts. to 1.60 cts.

Chicago, common, 1.05 cts. to 1.10 cts.; refined, 1.15 cts. to 1.20 cts.

Sheets:

Common, American per lb., 2.15 cts. to 2.75 cts.

Russia, per lb., 10½ cts. to 11.00 cts.

LUMBER—

New York:

Hemlock timber, 20 ft. and under, per M, $12.00 to $12.50.

Piling, Eastern spruce, 35 to 40 ft., 30 to 40% 12-in. butts, 4.25 cts.

Spruce, special cargoes, per M, $15.00 to $17.50.

Yellow pine, random cargoes, $15.50 to $17.00.

North Carolina pine, $2.25 to $2.40 advance over Norfolk rates.

San Francisco:

Oregon pine, per M, $15.50 to $17.50.

Redwood, per M, $18.20 to $20.00.

Redwood tank stock, up to 10 ft., $24.00 to $25.00.

GENERAL MATERIALS—

Lead, New York, 3.85 cts. to 3.90 cts.

Nails, Pittsburg, 1.40 cts.

Solder, per lb., 8½ cts. to 13 cts.

Spelter, per lb., 4.80 cts. to 13.00 cts.

Copper ingots, 12.85 cts. to 13.00 cts.

Granite, rough, New York, cu. ft., 40 cts. to 50 cts.

Limestone, New York, cu. ft., 70 cts. to 80 cts.

Ohio freestone, New York, cu. ft., 85 cts. to 90 cts.

Slate, Penn., block, per square, $4.00 to $5.00.

White lead, American, per lb., 5½ cts. to 6 cts.

Lime, common state, per bbl., 75 cts.

INDUSTRIAL NOTES.

THE ROGERS LOCOMOTIVE CO., Paterson, N. J., is reported to have just received an order for 45 locomotives for the Pacific Coast.

THE CHARLES HILLMAN SHIP & ENGINE BUILDING CO., Philadelphia, is reported to have made an assignment. Mr. Charles Hillman, President of the company, died Dec. 22, as was reported in our last issue.

THE Q. & C. CO., Chicago, manufacturers of railway specialties, will, in January, remove its New York offices from 100 Broadway to the corner of Liberty and Church Sts., where it will have combined offices and salesroom, carrying a considerable stock of machinery and tools of its own manufacture.

CONTRACTS FOR STEEL RAILS are about to be let by the Pennsylvania R. R. Co. as follows, according to press reports: Cambria Steel Co., 30,000 tons; Pennsylvania Steel Co., 30,000; Carnegie Steel Co., 30,000; Federal Steel Co., 10,000; Lackawanna Steel Co., 5,000; making a total of 105,000 tons.

THE SCHOENBERGER STEEL CO., Pittsburg, has contracted with the A. Garrison Foundry & Machine Co., Pittsburg, for machinery for a new wire rod mill, reported as to cost $250,000. Local papers state that the new mill will have a capacity of 400 tons every 24 hours and will be in operation in about five months. It is also stated that neither the Schoenberger nor the Oliver companies are members of the wire combine. The main building for the new wire mill will be 130 × 220 ft., and will be erected by the Riter-Conley Mfg. Co.

THE KENSINGTON SHIP & ENGINE BUILDING WORKS, Philadelphia, is reported to have a contract from the U. S. Government for a disinfecting barge, to cost $70,000, for use in the harbors of Havana and Santiago, Cuba, and San Juan, Porto Rico. It will be 162 ft. long, 32 ft. beam and capable of fumigating the clothing of 1,000 persons daily. It will be known as the "Protector."

THE BERLIN IRON BRIDGE CO., East Berlin, Conn., is furnishing and erecting the steel work of a new plant for the United Gas Improvement Co., Gloversville, N. Y., consisting of generator and boiler and engine house, about 50 × 80 ft., of fireproof construction throughout. The side walls are of brick and the roof framing of steel, supporting slate roof covering. The trusses are clear span, resting directly on the side walls of brick.

THE BALDWIN LOCOMOTIVE WORKS, Philadelphia, begins the year, says the Philadelphia "Record," with orders for 200 locomotives. During 1898 the works turned out 760 complete locomotives, many of which went to Japan and Russia. In 1897 only 501 were built, while 940 were constructed in 1891. Owing to the increased size, however, the 760 built last year represent in workmanship and cost almost as much as did the 940 of 1891.

THE SOUTH AMERICAN GENERAL ELECTRIC SUPPLY CO. is the name of a new concern incorporated for the purpose of selling American electrical supplies in Central and South American countries. The incorporators are all connected with the General Electric Co., Schenectady, N. Y., and it is understood that the company is the outcome of an effort on the part of the General Electric Co. to control more distinctively its foreign agencies.

THE RITER-CONLEY MFG. CO., Pittsburg, Pa., has a contract, according to report, for three buildings and extensions for the plant of the Michigan Alkali Co., Wyandotte, Mich., which is about to begin the manufacture of cement from the by-products of its soda ash plant. The main building will be 85 × 223 ft., with a lean-to and platform, and the smaller buildings will be 50 × 80 ft. and 30 × 50 ft., respectively. They will be of structural steel, with roofs and sides of corrugated iron.

THE NEW YORK AUTOTRUCK CO. has been incorporated with a capital stock of $1,000,000, to employ automobile trucks for general trucking service in New York city. It is understood that the company will employ wagons operated by compressed air engines made by the American Wheelock Engine Co., of Worcester, Mass. The plans of the company as given out contemplate hauling and delivering goods for merchants on a per ton per mile schedule at so low a figure that the maintaining of a private horse delivery system as at present done will be a luxury.

THE PAGE WOVEN WIRE FENCE CO., Adrian, Mich., on Dec. 14, shipped a train load to Nebraska, consisting of 30 cars, containing 400 miles of Page fence, which was ordered by its local agents to fill orders already taken for spring delivery. Dec. 30, another full train load, consisting of 37 cars, containing over 500 miles of Page fence, was to be shipped to E. C. Musgrave, Des Moines, Ia. Besides those just mentioned, two more full train loads will be shipped within the next 60 to 90 days in addition to the usual daily shipments. The company states that its looms are running 22 hours on six days of the week.

THE CLIMAX ROAD MACHINE CO., Marathon, N. Y., reports that its 1898 sales have been a little over 155% of those for 1897, which was the largest business previously done. The demand for crushers has caused the running of the plant day and night for about four months and overtime for the entire summer. Although this is the dull season of the year the stone crusher shop is being run full time and the road machine shop will commence operations, it is hoped, about six weeks earlier than usual as the company has practically closed out its stock and all indications point to a large demand for this year.

THE CAMBRIA STEEL CO., Philadelphia, having leased the Cambria Iron Co.'s works, has consolidated its New York offices, formerly at 100 Broadway and 33 Wall St., at rooms 1705 and 1706, Empire Building, 71 Broadway. Mr. H. L. Waterman has been appointed general sales agent for New York and vicinity, and will also give his attention to the sale of structural steel, steel blooms, billets and slabs. Mr. W. A. Washburn will negotiate the sale of steel rails and railway track fastenings, and Mr. L. R. Pomeroy will have charge of steel axles and other forging specialties. Mr. Thos. F. Russell, 102 Chambers St., New York, will sell as heretofore the special products of the Gautier Department.

THE FISCHER EQUIPMENT CO., Chicago, is reported in newspaper dispatches to have closed a contract with the American Motor Agency, Paris, France, through Count De Jotemps, President of the latter, for about $5,000,000 worth of motor vehicles. The company is to furnish 500 vehicles of the Wood motor pattern a year for the next 10 years, it is stated, the first installment to be delivered in Paris not later than March 15. The reports state that the agency has also made contracts with the Holyoke Motor Co., Holyoke, Mass., manufacturer of a gasoline motor carriage; the Overman Wheel Co., Chicopee Falls, Mass., making a light gasoline motor carriage, and the Stanley Automatic Carriage Co., Newton, Mass., maker of a steam motor carriage. The combined contracts are said to call for 1,500 vehicles to be delivered yearly for the next 10 years, the aggregate price to be paid being about $15,000,000.

THE NATIONAL SWITCH & SIGNAL CO. announces the completion of its consolidation with the Union Switch & Signal Co. We are informed that all of the apparatus heretofore manufactured by the Johnson Railroad Signal Co., the National Switch & Signal Co. and the Union Switch & Signal Co. will be supplied by the Union Switch & Signal Co., under which title all business will be conducted. The works at Swissvale and Easton, Pa., will be improved and maintained so as to secure a minimum cost of production, with maximum facilities for handling the business. The Department of Sales and Installation has been created with Mr. Charles Hansel, C. E. (formerly Vice-President and General Manager of the National Switch & Signal Co.), as Manager, with offices at 43 Cedar St., New York city, and he announces the following appointments, effective January 1st, 1899: Mr. Henry M. Sperry (formerly Signal Engineer and Western Agent of the National Switch & Signal Co.), as Signal Engineer and Representative, with office at 43 Cedar St., New York city. Mr. V. K. Spicer (formerly Signal Engineer and Agent, Western District of the Union Switch & Signal Co.), as Signal Engineer and Representative, with office at 1535 Monadnock Building, Chicago. This department will have full charge of all quotations for contracts and material and the installation of all work. All correspondence should be directed to it.

Contract Work Should Always be Advertised in a Paper Read by Contractors.

Nearly Every Prominent Contractor and Manufacturer of Contractors' Supplies in North America Reads Engineering News.